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ABSTRACT

This curriculum guide consists of guidelines and materials for use in developing a competency-based medical record education course for students in a medical record administration or technician program. Covered in the individual chapters are curriculum design; the role and responsibilities of medical record practitioners; the affective domain and identified affective characteristics of medical record administrators and technicians; educational objectives; student learning principles, preferences, and strategies; teaching strategies; and student evaluations. Along with pertinent text and guidelines, each chapter includes one or more of the following: glossaries, annotated bibliographies, student learning modules, evaluation instruments, and explanations of various teaching techniques. Appended to the guide are a frame of reference for medical record education; a correlation of major and specific responsibility statements with curriculum content; and American Medical Record Association standards and ethics. (MN)

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for
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TABLE OF CONTENTS

ACKNOWLEDGEMENTS
INTRODUCTION
CHAPTER PAGE

1 CURRICULUM DESIGN

Introduction 1
Part I - Curriculum Design in Medical Record Education 1
Part II - Introduction to Competency-Based Education (CBE) 5
Glossary 7
Part III - Practical Model for Individual Course Development 20
Summary 47
Appendix 1-1 Student Learning Module 1 49
Appendix 1-2 Student Learning Module 2 53
Annotated Bibliography 59

2 ROLES AND RESPONSIBILITIES OF MEDICAL RECORD PRACTITIONERS

Introduction 65
Part I - Summary of Role Delineation and Verification Studies 65
Part II - 1981 Update of Roles and Responsibilities of Medical Record Personnel 69
Table of Verified Major & Specific Responsibilities - ARTs 71
Table of Verified Major & Specific Responsibilities - RRAs 75
Part III - The Use of Updated Roles and Responsibilities Data by Medical Record Educators 80
Summary 97
Annotated Bibliography 98
Appendix 2-1 Frequency of Role Delineation Verbs in Accepted Role Statements - ART & RRA (Entry-level) 100
Appendix 2-2 Frequency of Role Delineation Verbs in Accepted Role Statements - ART & RRA (Experienced) 101

3 AFFECTIVE DOMAIN AND IDENTIFIED AFFECTIVE CHARACTERISTICS

Introduction 102
Theoretical Concepts 103

CHAPTER PAGE

Importance for Medical Record Educators 105
Identification of Critical Affective Characteristics 106
Implementation of Teaching in the Affective Domain 107
Summary of Chapter 117
Glossary 118
References 119
Annotated Bibliography 120
Appendix 3-1 Affective Characteristics 124
Appendix 3-2 Management of a Health Information System - MRA 125
Appendix 3-3 Clinical Site Affective Evaluation 131
Appendix 3-4 Helping Professions Inventory 134
Appendix 3-5 College Emblem 135
Appendix 3-6 Professional Appraisal for MRA Students 136

4 EDUCATIONAL OBJECTIVES

Introduction 139
Educational Objectives & Competencies 139
Classification of Instructional Objectives (Domains) 145
Action Verb Level Determinations 159
Summary 161
Annotated Bibliography 163

5 STUDENT LEARNING: PRINCIPLES, PREFERENCES, STRATEGIES

Abstract 166
Glossary 167
Introduction 168
How People Learn 170
Principles of Learning 171
Strategies 182
Annotated Bibliography 185
Bibliography of Learning Styles/Preferences Instrument 189
Appendix 5-1 Computer-Assisted Instruction 191
Appendix 5-2 Independent Learning 195
Appendix 5-3 Critical Incident Techniques 215
Appendix 5-4 Student-Structured Learning 221
Appendix 5-5 The Lecture 233
Appendix 5-6 Small Group Learning 240

6 TEACHING STRATEGIES

Introduction 247
Selecting Teaching Strategies 248
Glossary 253

CHAPTER PAGE

Teaching Strategy: Lecture/Assigned Reading 257
Teaching Strategy: Demonstration and Practice 261
Teaching Strategy: Field Trip 263
Teaching Strategy: "Buzz" Groups or Team Task Groups 265
Teaching Strategy: Brainstorming 267
Teaching Strategy: In-Basket Techniques 270
Teaching Strategy: Case Method Techniques/ Role -Playing 272
Teaching Strategy: Contract/Self-Directed Instruction 274
Summary 280
Annotated Bibliography 281

7 EVALUATION

Scope of Chapter 284
Introduction 284
Evaluation 285
Evaluation and Educational Objectives 285
Formative and Summative Evaluation 289
Diagnostic Evaluation 291
Taxonomy Domain and Evaluation 291
Interpreting Evaluation Results 297
Location of Instruction and Evaluation 298
The Clinical Setting 299
Summary 300
Afterword 301
Appendix 7-1 Evaluation Techniques 303
Appendix 7-2 Constructing Classroom Achievement Examinations 305
Annotated Bibliography 324

Appendix A A FRAME OF REFERENCE FOR MEDICAL RECORD EDUCATION 326

Introduction
I. Patients and Their Health Care Needs
II. The Health Care Field and Its Institutions
III. The Medical Record Profession
IV. Philosophy of Professional Education
V. Roles and Responsibilities of Medical Record Practitioners
VI. Environmental and Societal Forces

Appendix B CORRELATION OF MAJOR AND SPECIFIC RESPONSIBILITY STATEMENTS WITH CURRICULUM CONTENT 368

Conceptual Model for Curriculum Development
Curriculum Planning Grids

PAGE

Appendix C 377

Essentials & Guidelines of an Accredited Educational Program for the MRT
Essentials & Guidelines of an Accredited Educational Program for the MRA
AMRA Code of Ethics
Educational Resource Document Evaluation Questionnaire

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INTRODUCTION

This Educational Resource Document (ERD) for the medical record field has been developed by the American Medical Record Association (AMRA) through contract #232-80-0056 provided by the Department of Health and Human Services, Health Resources Administration.

The purpose of this document is to help medical record educators develop and manage educational programs that prepare medical record students for competent practice in the health care delivery system.

The underlying conceptual framework of medical record education is that roles and responsibilities of professional practice form the bases for curriculum design and development. Definitive competencies are developed from the specific responsibility statements for entry-level practitioners identified by the profession. The rationale for competency-based curricula in medical record education is that practitioners must have the ability to perform specialized job functions in order to practice successfully their profession of organizing, managing, delivering, and evaluating medical record and health information services wherever required in the health care system. The goal of competency-based medical record education (CBE) is preparation of practitioners who have professional knowledge, analytical and problem-solving skills; technical skills in the development and maintenance of medical records and health information services, human relations, and managerial skills; and professional judgment covering accuracy and completeness of information and legal aspects of its use.

Throughout the ERD, a competency-based approach to educational program development is used. This is a result of research studies conducted by the AMRA which have identified the specific responsibilities for entry-level practitioners, Accredited Record Technicians (ARTs) and Registered Record Administrators (RRAs) - the first step in planning a competency-based educational program. Critical affective behaviors and characteristics have also been identified and are addressed throughout the ERD as a part of the educational process.

This approach was selected to be used in the ERD in recognition of the changing direction of the field and the need for proficiency test development, as mandated and promoted by the government. The ERD uses the results of role delineations and focuses on elements essential to entry-level practice in which competence must be demonstrated. There are many approaches to education for competence in a field; however, for the purposes of this document, the competency-based education approach is emphasized.

Each chapter in the ERD is designed as a self-contained unit, and contains a glossary, an annotated bibliography, and appendices of related educational materials. However, there are cross references from chapter to chapter. The concept of self-contained units is not diminished given the discrete subject matter of each chapter since each chapter stands well alone or as a part of a larger whole. For teaching purposes, a chapter may be removed and used as a self-contained unit. It is anticipated that the ERD will undergo change periodically, as it is updated.

Chapter 1 addresses curriculum development. Competency-based education and traditional approaches to education are discussed in detail. Guidelines are provided for curriculum design in medical record education, course development, needs assessment, goals and objectives development, program implementation, and evaluation.

Chapter 2 lists verified specific responsibilities of entry-level ARTs and RRAs. A summary of previous AMRA studies is presented as well as a discussion of educators' use of current data.

Chapter 3 introduces educators to the affective domain. As a newly researched area for the AMRA, it presents findings from a 1981 research study outlining critical affective behaviors and characteristics important in the profession.

Chapter 4 provides specific information on behavioral objectives development. Verified responsibilities presented in Chapter 2 are illustrated here to indicate the essential roles they play in a competency-based educational program.

Chapter 5 details principles and preferences of student learning. Content is based on seven principles of learning and is presented to help educators identify appropriate learning strategies and experiences for medical record students.

Chapter 6 describes selected teaching strategies appropriate in medical record education. It contains examples of many teaching approaches related to the specific responsibilities of medical record practitioners.

Chapter 7 provides an introduction to evaluation, with its focus on student evaluation. Detailed information on test construction is also provided.

Appendix A provides background information to assist faculty in developing a philosophy of education for their own programs. It discusses a philosophic frame of reference for medical record education which delineates six components: (1) patients and their health care needs; (2) the health care field and its institutions; (3) the medical record profession and its professional organization; (4) the philosophy of professional education for medical record practice; (5) the roles and responsibilities of medical record practitioners; (6) and the environmental forces which impact on education and professional practice.

Appendix B provides curriculum planning grids which may assist educators with incorporation of responsibility statements into the curriculum content areas specified in the Essentials.

Appendix C includes Essentials and Guidelines for accredited educational programs and the Code of Ethics for medical record practice. It also includes an Evaluation Questionnaire to be completed upon review and use of the document and returned to the AMRA Academic Division.

The content of this Educational Resource Document, which focuses on essential responsibilities and competencies of ARTs and RRAs, is intended to be useful to all medical record educators: those who are developing new programs at the associate and baccalaureate degree levels; those who are managing established programs; and those who are planning and conducting inservice and continuing education programs for practitioners.

Chapter 1

Curriculum Design

INTRODUCTION

The purpose of this chapter is to present an approach to curriculum planning that is relevant to the future professional needs of students in medical record educational programs. It is a presentation of a general approach to curriculum in competency-based education (CBE) that can be adapted to the needs of individual educational programs. The chapter can be used as a source of information on curriculum planning and products, competency-based educational theory, and a practical approach to CBE course development.

Part I, Curriculum Design in Medical Record Education, covers *Curriculum Planning,* including needs assessment, development of goals and objectives, implementation, and evaluation; *Curriculum Products;* and the *Bases for Curriculum Planning.*

Part II, an Introduction to Competency-Based Education, includes *Competency Based Educational Theory, Definitions of Terms, CBE and Faculty Roles,* and a four phase *Competency-Based Model for Medical Record Education.*

Part III provides a model for competency-based individual course development.

PART I

CURRICULUM DESIGN IN MEDICAL RECORD EDUCATION

The major goal of a medical record educational program is to help students develop the competencies needed for professional practice. The tool used to accomplish this goal is the curriculum. The word curriculum has had many different meanings. Early definitions referred only to the content area and a curriculum design was a content outline. The definition has broadened with time until the modern interpretation includes all planned experiences that learners have in educational programs whose purpose is to achieve broad goals and specific learning objectives through a planned framework that includes related theory, research, and present professional practice.

Curriculum can refer to all the courses and experiences that students have in a medical record administration or technician program. It can also refer to a specific course or courses within the overall program. However, most planners in medical record programs are concerned mainly with individual course preparation.

There are two aspects to the development of curriculum: planning and product.

CURRICULUM PLANNING

Curriculum planning is the process through which plans are devised to enable learners to achieve the desired goals and objectives. This process consists of four phases:

1. Needs assessment,
2. Development of goals and objectives/competencies and objectives,
3. Implementation,
4. Evaluation.

1. Needs Assessment

Needs assessment is a process by which a planner can identify the problem or issues to be addressed by the program or course, analyze the environment where the problem is occurring, and develop a plan to resolve the problem. A needs assessment reveals the difference between the ideal situation and what currently exists. During the needs assessment phase, a planner:

- determines what needs to be done,
- determines who can supply the information needed,
- collects and analyzes the information including:
  - professional environment
  - academic environment
  - types of learners
  - constraints.

2. Development of Goals and Objectives/Competencies and Objectives

Once needs have been determined, goals and objectives or competencies and objectives are developed which define what the curriculum intends to accomplish.

Traditionally, curriculum planners developed broad goals. These goals were broken down into behavioral objectives which specified exactly what a student would be able to do to reach the goals. In competency-based education, goals are replaced by competencies. These are statements of general abilities that professionals must have to perform the specific responsibilities required of the profession. Competencies are then broken down into objectives which state what one should be able to do to attain the desired competency.

3. Implementation

During the implementation phase, the goals and objectives (or competencies and objectives) are related to the content areas. The content area is divided into sequential teaching units, textbooks are selected, and course syllabi are prepared. Teaching methods and learning experiences are designed to best meet the needs of the types of learners to be instructed. An in-service program is usually presented to faculty members to acquaint them with the curriculum plan.

4. Evaluation

Evaluation of the curriculum is the final step in the planning process. Evaluation plans are devised to measure student attainment of the goals and objectives and to measure the success of the various materials and methods.

Additional information on curriculum planning can be obtained from textbooks on curriculum design by Taba, Haas, McNeil, and others (see the bibliography for references by these authors).

CURRICULUM PRODUCT

The end result of the curriculum planning process is the curriculum product. This is a written plan for achieving the broad goals and specific learning objectives developed during the planning process. Goals and objectives, course syllabi, evaluation plans, and methodological materials are all found in the curriculum product. These tools enable an instructor to present a course which will move students from where they are in relation to experience, training, and education to the specific measurable levels of achievement that have been developed in the planning process.

BASES OF CURRICULUM

The central problems of curriculum planning must determine the scope of expected learning and establish continuity and proper sequencing of learning experiences.

Traditionally, curricula utilized by medical record programs have been subject-oriented. For a curriculum to be relevant to the learner, however, the planner must consider more than the content. Three major areas underlie all curriculum planning and the resulting curriculum products. These are:

1. Social forces/state of knowledge within the field
2. Characteristics of learners
3. Learning theories

1. Social Forces/State of Knowledge Within the Field

For a curriculum to be truly effective it must take into consideration the social constraints on the learner and learning situation. In our rapidly changing society, it is no longer possible for students to leave educational programs expecting that their school acquired information and skills will serve them throughout their professional lifetime. Due to the knowledge explosion within information management, this skill and knowledge base rapidly becomes obsolete. Today, students must be educated to develop the ability and desire to acquire new knowledge and to develop new skills throughout their professional life. Today, the most important result of education is not merely the acquisition of knowledge, but the development of skills that enable one to continue to acquire knowledge and to organize this information so that it is useful. This approach will enable students to deal with change as it occurs within their profession. A well-developed curriculum prepares students for the future in our changing world.

Six major forces which impact medical record education are:

1. Patients and Their Health Care Needs

2. The Health Care Field and its Institutions -- including factors which influence health and disease, delivery of health care services, and current health care issues.

3. The Medical Record Profession -- how professional practice is carried out and the structure of the professional organization.

4. The Philosophy of Professional Education for Medical Record Practice -- including the clinical base for medical record education, AMRA's educational philosophy, the recommendations of the National Commission on Allied Health Education and the educational philosophy of the individual universities and colleges where medical record programs are located.

5. The Roles and Responsibilities of Medical Record Practitioners

6. Environmental Forces Which Impact on Medical Record Professional Practice -- technological, political, economic, and social forces, including values and value shifts.

Further discussion of these six bases can be found in the frame of reference in Appendix A.

Consideration should also be given to what social or cultural factors affect the learners and to how the curriculum can provide for these differences. An example of this would be to consider what responsibilities students have outside the classroom. Student's living situations, as well as cultural or social backgrounds, can affect learning. Special consideration should be given to students from other countries or with special needs, such as full time employment or physical handicaps.

2. Characteristics of Learners

Planners need to consider the learners who will experience this curriculum, including the parameters of age, cultural background, work experience, aural versus visual learning, and preferred learning style. Further discussion of this topic can be found in Chapter 5.

3. Learning Theories

How humans learn is an important consideration when planning instructional strategies. Curriculum planning includes devising teaching methods and materials. These methods should be designed to fit the level of the adult learner. They should be developed to meet the needs of students with different styles of learning. More information on learning preferences and strategies can be found in Chapter 5.

PART II

INTRODUCTION TO COMPETENCY-BASED EDUCATION

The concept of a competency-based educational program (CBE) suggests a curriculum structure which is capable of assuring entry-level competence of graduates for occupational practice in a field. A CBE program consists of the following components:

1. defining the occupation, emphasizing the general behaviors and characteristics essential for effective practice,
2. role delineation,

3. identifying professional competencies,
4. developing terminal and enabling objectives,
5. planning student learning utilizing behavioral objectives, and
6. assessing mastery of terminal objectives.

Utilizing these six components enables educators to train students to develop specific measurable competencies that will enable them to meet their responsibilities as medical record practitioners. The translation of these components is offered for adoption in medical record curricula because most educators have been trained to think or act as content experts, not as educators charged with teaching competencies (competence) which can be measured.

The American Medical Record Association acknowledges the need for enhancing the professional competence of its practitioners by encouraging emphasis on entry-level responsibilities and competencies in school programs and on the development of competency-based certification examinations. This chapter is designed to help program directors and faculty organize and administer curricula which will assure the professional competency of their graduates.

The most common method of curriculum change has been to revise content while preserving the subject-centered structure. Emphasis needs to be on learning how to perform a particular responsibility and not on accumulating knowledge about health information systems. A CBE curriculum arranges learning and teaching around the functional elements or competencies and responsibilities of medical record practice. Content is considered in relation to the attainment of the competency, not as an end in itself.

An examination of the six components of CBE implies that a competency rather than subject-centered approach requires an identification of the professional responsibilities (roles, functions, tasks, duties) to be performed by a competent practitioner. It also implies a specification of professional competencies which result from instructional experiences. Student mastery of these responsibilities and competencies leads to entry-level ART or RRA professional competency--the ability to perform the professional responsibilities descriptive of the occupation.

"One major unresolved issue...(in competency-based education) is the... lack of clear definitions for those concepts which are cornerstones of the subject." (Gale, 1975) While an extensive review of the literature has revealed agreement on definitions of CBE, terminal and enabling objectives, a general consensus has not been reached on roles, responsibilities, or functions. This ambiguity has resulted in a lack of focus within the CBE movement regarding how competencies should be developed. This chapter will clarify this issue after defining basic terms. Areas of disagreement or controversy will be pointed out within the definitions.

GLOSSARY

Description of the occupation: A definition of the general behaviors and characteristics essential for effective practice of an occupation including a description of the environmental and social context in which the occupation is performed. (Hanken, 1979) (See Figure 1)

Position: Present and future positions or titles generic* to the field of practice to be assumed by graduates upon occupational entry for which education and training is designed. Examples appropriate for an RRA include: Director, Assistant Director, Section Supervisor, and Quality Assurance Coordinator. Examples appropriate for an ART include: Coder, Health Data Abstractor, and Tumor Registrar.

Role: A profile of specific responsibilities and sometimes the position held by the practitioner.

Role Delineation: The description of the specific responsibilities essential to practitioner goal attainment.

Areas of Responsibility/Practice Domains: A configuration of specific responsibilities that occur when a position is analyzed in relation to types of responsibilities. (See Figure 2)

Responsibility/Functions: A statement of activities, duties, or tasks of a competent practitioner in the role(s) identified.

Competence: The state or quality of being capable of adequate performance.

Professional Competency: A statement describing the underlying knowledge, skills, values, attitudes, and interests needed to perform specific responsibilities according to predetermined standards.

Competency-Based Education (CBE): An academic program in which the agreed upon learning outcomes (competencies) and behavioral outcomes (evaluation indicators), reflecting successful functioning in professional roles, are specified and made public in advance of learning experiences.

Terminal Objective: A statement specifying the knowledge, skill, or behavior a student must demonstrate for each professional competency.

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* In this context, generic means all positions of a given type in a specific field. Examples include all entry-level generalists.

Enabling Objective: A statement describing an activity which will lead to successful completion of the terminal objective. Each enabling objective includes the given (condition), the behavior (what is to be done), and the criterion for evaluating or measuring that accomplishment. Enabling objectives may be written for the cognitive, affective, or psychomotor domain.

Cognitive Objective: Describes the knowledge that must be acquired by the student.

Affective Objective: Describes the interests, attitudes, values, and judgments that must be demonstrated by the student.

Psychomotor Objective: Describes specific motor skill(s) to be performed by the student.

Behavioral Objective: The statements which describe what learners will be able to do upon completion of a course or unit of instruction. Two types of behavioral objectives used in CBE are Terminal and Enabling Objectives.

Figure 1 - Description of an occupation: Health Information Manager
(Hanken et al, 1980)

Example appropriate for an RRA

Health Information Manager
(Director)

Directs and coordinates, through subordinate personnel, health information activities and functions in hospitals, health maintenance organizations, clinics, government and quasi-governmental agencies, third party payors, private industry and similar organizations, utilizing knowledge of current practices and standards in health information.

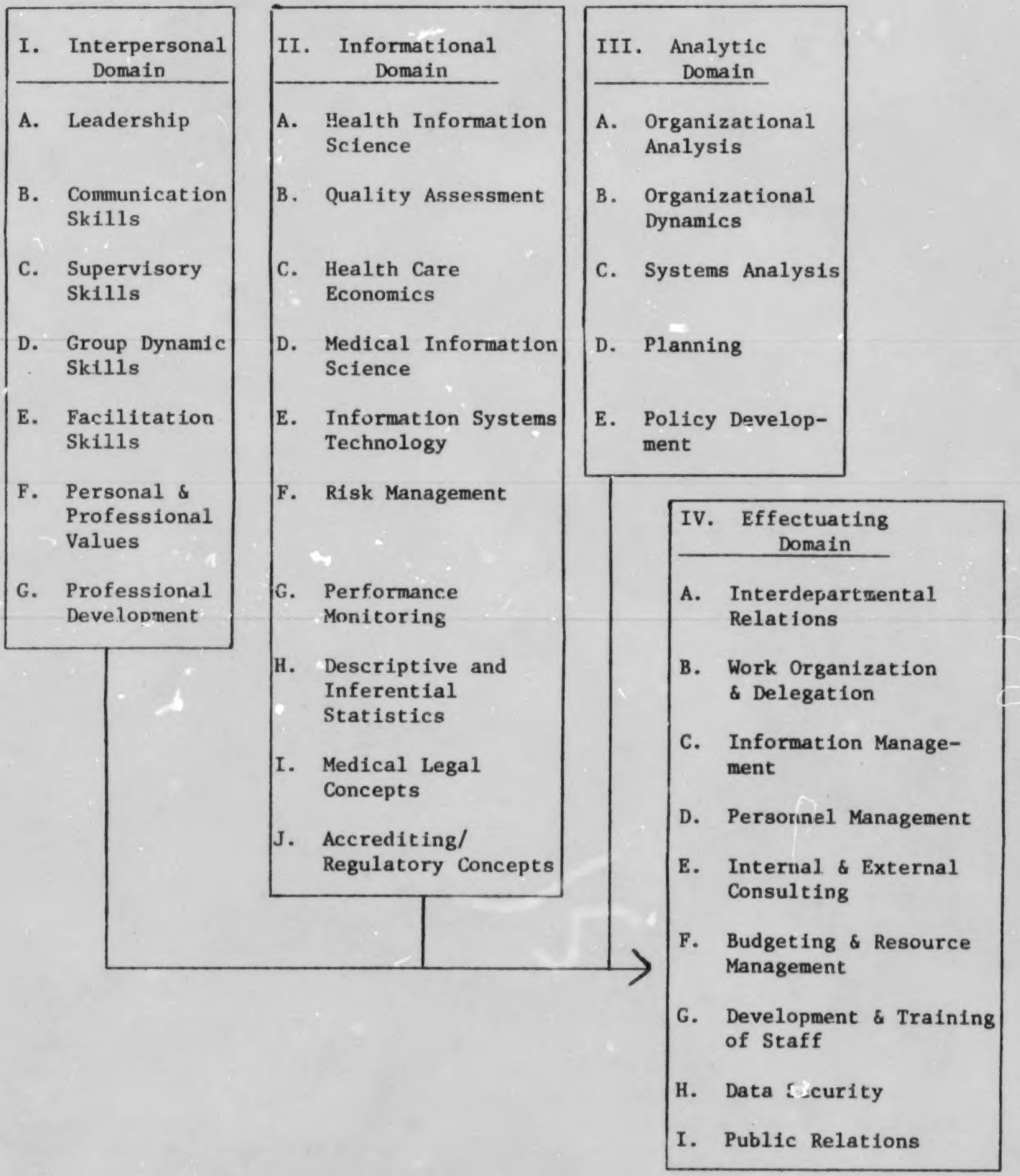
Consults with management and clinical staff to design and implement health information systems which fulfill the organization's goals and policies as well as accrediting and regulating agency requirements; recommends and technically monitors health record data and format to assure usability of the record; conducts special studies and investigations pertaining to development of new health information systems to meet current and projected needs; develops and implements policies and procedures for manual documentation and/or computer input, storage and retrieval of health information to provide support for direct patient quality assessment and assurance; safeguards the patient's right to confidential health information by assuring correct decision-making in processing medical-legal document, insurance and correspondence requests in conformance with Federal, state and local statutes.

Serves as a member of management and clinical committees, organizes work, determines objectives and timelines, develops staffing plan and assigns or delegates ~~responsibility~~ for health information activities. Reviews and analyzes patient and institutional reports, records, and directives and confers with other administrative personnel to obtain data for planning activities; coordinates quality assessment and assurance actitivies including criteria and methodology development. Organizes a budget for planning and controlling operations designed to meet health information objectives in a cost effective manner; confers with administration on accreditation, legislative and regulatory information.

Prepares reports and records for management on health information activities; evaluates current systems and practices for accomplishing objectives in order to develop and implement alternate methods designed for improvement of work. Analyzes and resolves work problems or facilitates workers in solving problems; initiates or suggests plans to motivate workers to achieve objectives; recommends or initiates personnel actions such as hiring, promotions, transfers, discharges and disciplinary measures. Assesses need for in-service education, may develop materials and conduct instructional programs; may confer with workers' representative to resolve grievances.

Figure 2 - Areas of Professional Practice/Practice Domains

Manager, Director, Administrator Role
(Hanken et al, 1980)



I. Interpersonal Domain

- A. Leadership
- B. Communication Skills
- C. Supervisory Skills
- D. Group Dynamic Skills
- E. Facilitation Skills
- F. Personal & Professional Values
- G. Professional Development

II. Informational Domain

- A. Health Information Science
- B. Quality Assessment
- C. Health Care Economics
- D. Medical Information Science
- E. Information Systems Technology
- F. Risk Management
- G. Performance Monitoring
- H. Descriptive and Inferential Statistics
- I. Medical Legal Concepts
- J. Accrediting/ Regulatory Concepts

III. Analytic Domain

- A. Organizational Analysis
- B. Organizational Dynamics
- C. Systems Analysis
- D. Planning
- E. Policy Development

IV. Effectuating Domain

- A. Interdepartmental Relations
- B. Work Organization & Delegation
- C. Information Management
- D. Personnel Management
- E. Internal & External Consulting
- F. Budgeting & Resource Management
- G. Development & Training of Staff
- H. Data Security
- I. Public Relations

Before a CBE curriculum can be considered, it is necessary to merge the definitions into a logical sequence for competency identification.

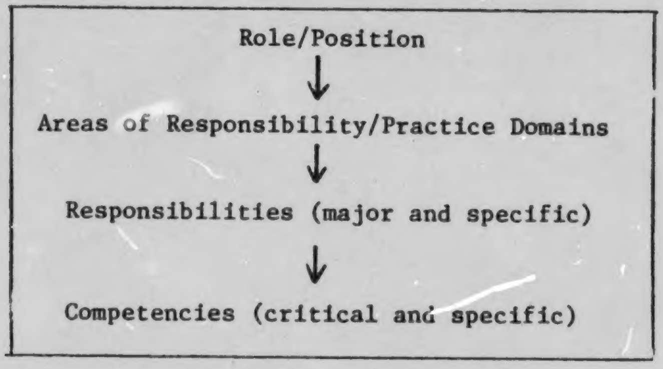

Role/Position
Areas of Responsibility/Practice Domains
Responsibilities (major and specific)
Competencies (critical and specific)

Figure 3 - Progression of basic steps in the identification of competencies

As seen in Figure 3, the process consists of identifying:

- the role/position,
- the areas of responsibility/practice domains,
- the major and specific responsibilities,
- the competencies.

CBE AND FACULTY ROLES

Those who endorse competency-based education must recognize that implementation alters the traditional format and delivery of education. Not only will the structure of the educational activities change, but faculty will need orientation to the record-keeping systems and time schedules in order to understand their new roles as well as what strategies need to be employed.

Conventional, subject-centered program curricula focus principally on what content should be presented to students in lecture, laboratory, and clinical experiences and the time/credit appropriate for the different kinds of instruction. In a curriculum aimed at assuring mastery of defined competencies, time becomes a variable that determines the student's mastery of the competencies. The educator's role becomes that of a planner as well as a teacher.

The second new role of an educator in a CBE program is that of a manager. As manager, the educator specifies the objectives, provides learning resources for achieving behavioral objectives, and pre-specifies the assessment criteria for measuring student progress.

The third role is that of evaluator. As evaluator, the educator assists students in assessing their progress toward mastery of competencies. The path the student selects for achieving mastery is insignificant. In a mastery-oriented system, the evaluator is more concerned with recording the nature of the student's progress, independence, and personal responsibility toward learning. Educators can anticipate adjustments when shifting from conventional lecture/examination-specific teaching styles to an individualized mastery-oriented style which necessitates the adoption of the planner-manager-evaluator role.

CBE CURRICULUM MODELS

Various competency-based curriculum models have been developed in the allied health professions. These models provide suggestions for the kind of decisions that must be made as well as supplying a structure with which to make them. Each model encourages that professional performance for a profession be defined within a context of work-related variables.

This chapter presents two models. The Allied Health Competency-Based Education for Medical Record Programs Model (Figure 4) presents a theoretical review of the competency-based educational process. It was developed from the Johnson Process Model and the Modified Johnson Process Model by Anderson and Reding and further modified by Task Group D of the ERD project. The adapted model integrates the steps necessary for incorporating competencies into curricula. This model delineates the processes and tasks involved in CBE development.

The modified Segall Systematic Course Design Model (Figure 5), presents a practical, step-by-step process that can be used by educators to develop a CBE curriculum for a specific course. It is not necessary to adopt all the steps in the CBE models. Educators should select the parts that are valuable for their program needs.

The Allied Health CBE Model developed for medical record education is divided into four phases. Each phase is discussed in order to present the entire CBE process as it applies to medical record education.

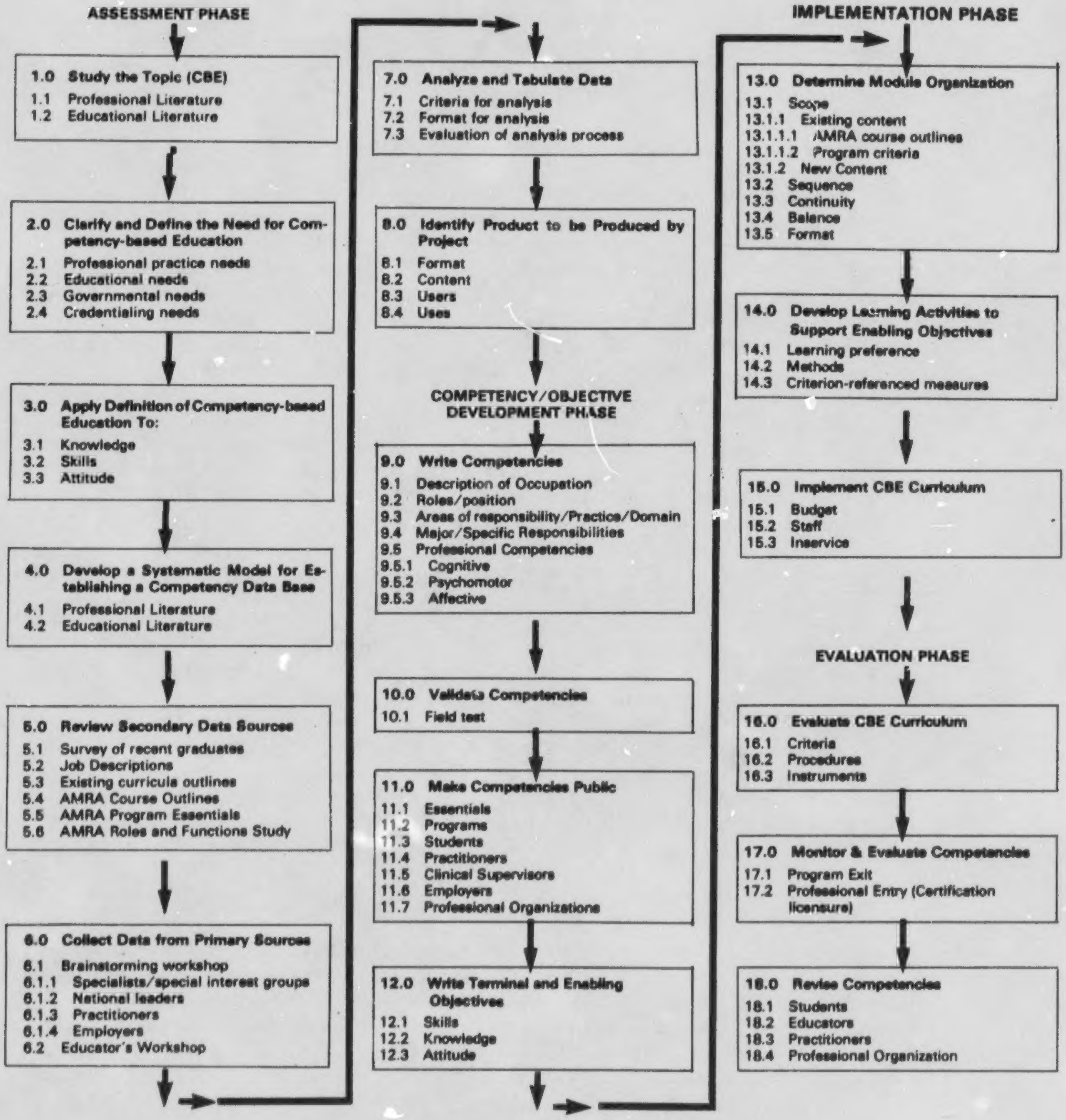
ASSESSMENT PHASE

1.0 Study the Topic (CBE)

The first step in CBE curriculum planning is to study the topic. Literature on the health professions and education provides a rich resource of information on competency-based education. A review of the literature enables the curriculum developer to define the topic in terms of the educator's curriculum needs and to broaden his/her previous understand of the concept. The Index to Hospital Literature, the Education Index, and Educational

Figure 4

Allied Health Competency-Based Model
Developed for
Medical Record Technician and Medical Record Administration Education


ASSESSMENT PHASE
1.0 Study the Topic (CBE)
1.1 Professional Literature
1.2 Educational Literature
2.0 Clarify and Define the Need for Competency-based Education
2.1 Professional practice needs
2.2 Educational needs
2.3 Governmental needs
2.4 Credentialing needs
3.0 Apply Definition of Competency-based Education To:
3.1 Knowledge
3.2 Skills
3.3 Attitude
4.0 Develop a Systematic Model for Establishing a Competency Data Base
4.1 Professional Literature
4.2 Educational Literature
5.0 Review Secondary Data Sources
5.1 Survey of recent graduates
5.2 Job Descriptions
5.3 Existing curricula outlines
5.4 AMRA Course Outlines
5.5 AMRA Program Essentials
5.6 AMRA Roles and Functions Study
6.0 Collect Data from Primary Sources
6.1 Brainstorming workshop
6.1.1 Specialists/special interest groups
6.1.2 National leaders
6.1.3 Practitioners
6.1.4 Employers
6.2 Educator's Workshop
7.0 Analyze and Tabulate Data
7.1 Criteria for analysis
7.2 Format for analysis
7.3 Evaluation of analysis process
8.0 Identify Product to be Produced by Project
8.1 Format
8.2 Content
8.3 Users
8.4 Uses
COMPETENCY/OBJECTIVE DEVELOPMENT PHASE
9.0 Write Competencies
9.1 Description of Occupation
9.2 Roles/position
9.3 Areas of responsibility/Practice/Domain
9.4 Major/Specific Responsibilities
9.5 Professional Competencies
9.5.1 Cognitive
9.5.2 Psychomotor
9.5.3 Affective
10.0 Validate Competencies
10.1 Field test
11.0 Make Competencies Public
11.1 Essentials
11.2 Programs
11.3 Students
11.4 Practitioners
11.5 Clinical Supervisors
11.6 Employers
11.7 Professional Organizations
12.0 Write Terminal and Enabling Objectives
12.1 Skills
12.2 Knowledge
12.3 Attitude
IMPLEMENTATION PHASE
13.0 Determine Module Organization
13.1 Scope
13.1.1 Existing content
13.1.1.1 AMRA course outlines
13.1.1.2 Program criteria
13.1.2 New Content
13.2 Sequence
13.3 Continuity
13.4 Balance
13.5 Format
14.0 Develop Learning Activities to Support Enabling Objectives
14.1 Learning preference
14.2 Methods
14.3 Criterion-referenced measures
15.0 Implement CBE Curriculum
15.1 Budget
15.2 Staff
15.3 Inservice
EVALUATION PHASE
16.0 Evaluate CBE Curriculum
16.1 Criteria
16.2 Procedures
16.3 Instruments
17.0 Monitor & Evaluate Competencies
17.1 Program Exit
17.2 Professional Entry (Certification licensure)
18.0 Revise Competencies
18.1 Students
18.2 Educators
18.3 Practitioners
18.4 Professional Organization

Resources Information Center (ERIC) can supply recent information on the topic. These indexes are available in college libraries. When developing a competency-based curriculum, ask the librarian to maintain an "ongoing" search of the topic in order to have the latest literature on the topic as it becomes available.

A review of the literature will enable educators to explain the CBE concept to one another and to relate this concept to departmental goals. It also provides a means for keeping all persons who are involved in CBE curriculum up-to-date with current developments in CBE.

2.0 Clarify and Define the Need for Competency-Based Education

One of the favorable outcomes of a competency-based curriculum is improved educational accountability for preparing individuals for a professional occupation. Forces from the government, employers, and students pursuing an occupational education, are demanding that educators assure them that a specific curriculum will produce effective graduates for the field of practice. Can graduates apply the knowledge relating to the occupation effectively? Emphasis is not on what the graduate knows, but on how well s/he can perform.

The literature provides information in each of the four areas mentioned in the model which clarify the need for CBE. Educators must be convinced of the need for CBE or the development of a CBE curriculum will become an unbearable task.

3.0 Apply Definition of Competency-Based Education to: Knowledge, Skills, and Attitudes

To produce an effective practitioner, an educator must consistently ask what the practitioner needs to know, be able to do, values, and behaves. The traditional subject-centered, course-oriented curriculum tends to emphasize only the knowledge needed. It fails to measure the student's application of the knowledge learned and progress in the development of professional behavior. The CBE curriculum defines the knowledge, skills, and attitudes necessary for effective performance of each pre-defined professional competency provided by the occupation.

4.0 Develop a Systematic Model for Establishing a Competency Data Base

When developing or converting to a CBE curriculum, it is helpful to have a visual understanding of the steps necessary to achieve the final goal of CBE. What steps are needed to define the professional competencies in the curriculum? Where do behavioral objectives fit in? What will the end product that is to be used by students and faculty look like?

Any curriculum model, such as the eighteen-step model being discussed here, can serve the purpose of visually displaying in a systematic and sequential order, the necessary steps toward desired change in curriculum. Other models can be used and may be found in both educational and health literature for the profession. Educators can develop their own step-by-step model. Once a model is selected or developed, display it on a flip chart or divide it into phases with a time-line attached to each phase. The model presented here is divided into four phases: needs assessment, development of competencies and objectives, implementation, and evaluation. Further information on the four phases of curriculum planning can be found later in this chapter.

5.0 Review Secondary Sources

Steps 5-8 are developmental steps leading to the identification of professional competencies. Two sources of information are essential for the effective identification of competencies for an occupation:

1) Primary sources, such as direct interaction with practitioners in the field, and

2) Secondary sources, such as written documents related to the profession.

Step 5 lists the major *secondary sources* which can be utilized in identifying responsibility statements. From these secondary sources, lists or responsibility statements can be generated according to major functional areas descriptive of the occupation. For example, under the functional area of personnel management in medical records might be these responsibilities: 1) interview candidates for employment, 2) orient new staff, 3) revise job descriptions, etc.

AMRA has identified and verified 162 responsibilities for medical record professionals. These can be found in Chapter 2. Lists of responsibility statements descriptive of each occupation become the necessary data base from which professional competencies are written. Secondary data sources provide statements that describe the occupation today as compared to what entry-level practitioners will or should be doing when they finish their education. Such statements can be interpreted as a status quo description of the occupation. Primary sources, as mentioned in Step 6.0, provide the basis of identifying the responsibilities practitioners will be assuming in the future.

6.0 Collect Data from Primary Sources

Interaction with practitioners is essential in curriculum development. Whether the practitioner is asked to become involved indirectly or directly, their input lends credibility to the content of the curriculum. One method for obtaining input from generalist practitioners is small group brainstorming sessions with employers, other educators, and practitioners in specialty areas. Brainstorming sessions can be divided into two phases:

Phase I - Small group brainstorming about the social, technological, political, and economic forces impacting the profession now and in the future;

Phase II - Small group brainstorming of occupational responsibilities not already identified from secondary sources which are anticipated as a response to the forces identified in the Phase I brainstorming.

Brainstorming forces persons representing an occupation to look at where the occupation is now and where the occupation is going. This "future" orientation is an essential element in CBE curriculum planning.

7.0 Analyze and Tabulate Data

All status quo and future-oriented responsibilities are integrated in this step. All responsibilities are listed under the appropriate functional areas describing the occupation. To insure accuracy, a listing of responsibilities is sent to a sample of entry-level practitioners for validation. This was part of the study process for the preparation of this document.

The studies conducted for this document resulted in the updating of the 1978 Roles & Functions study and identified entry-level responsibilities for the medical record profession. Educators who develop a CBE curriculum must further develop these data by identifying competencies based on these responsibilities. The model presented later in this chapter provides a stepwise process that can be used to accomplish this goal.

8.0 Identify Product to be Produced by Project

Early in the process, it is good for the educator(s) involved in the curriculum change to think about the products that will be produced as a result of the change. The product is the written plan for course development. It includes responsibilities, competencies, objectives, syllabi, teaching materials, and criterion-referenced testing material. What should the product(s) look like? How should it be arranged? How will you use it? What will it consist of? An example of the product(s), displayed on a flip chart, is helpful. Like the curriculum model, this example visually reminds those involved in the curriculum change how all the information will appear when provided to students. Segall's CBE Course Model is an excellent example of a CBE product. Educators are encouraged to modify these models or any model to suit their needs.

COMPETENCY AND OBJECTIVE DEVELOPMENT PHASE

The second major phase in CBE curriculum development is to prepare competency statements and to develop terminal and enabling objectives.

9.0 Write Competencies

This step, whether done at the national/association level, or by educators involved in CBE curriculum planning at some future date, involves writing the competencies necessary for each responsibility statement. Entry-level cognitive, psychomotor, and affective professional competencies should be considered for each responsibility. Examples of professional competency statements are illustrated in Figures 17 and 19. After competencies have been written, the description of the occupation must be revised to reflect the competencies. Both the competencies and the description are then ready for validation.

10.0 Validate Competencies

Validating competencies is one of the most important steps in this model. Validation can be carried out on a limited scale by educational programs involved in CBE curriculum planning. Identification and validation of competencies for a profession must be conducted on a national scale.

A representative sample of entry-level practitioners need to be given the opportunity to verify that the competencies describe the entry-level responsibilities they perform. (Entry-level refers to one year or less of employment following certification). Through statistical analysis of practitioners' responses to the competencies, valid competencies would be selected for inclusion in the CBE curriculum.

Competencies which are validated and subsequently ratified by the Council on Certification must be included in the CBE curriculum. Educators may add to the list of competencies to meet local and regional needs but they may not delete from the list of validated competencies.

11.0 Make Competencies Public

Once the professional competencies have been ratified by the Council on Credentialing, they must be included in the Essentials for Accreditation of Educational Programs for MRT and MRA Program Approval and made public to all parties associated with the professional occupation.

Most importantly, students should be informed of the competencies in writing and in advance of learning activities so that they may best utilize their opportunities to develop mastery of these competencies. Mastery of professional competencies is based on students entering medical record programs with certain abilities which enable them to achieve this level of proficiency.

It is also necessary to maintain a broad educational perspective so that medical record students graduating from competency-based programs do not become narrowly focused only on their future professional responsibilities.

12.0 Write Terminal and Enabling Objectives

Once competencies have been identified, two types of objectives are developed that will enable learners to master these competencies. Terminal objectives (TO's) are statements that express what the student will know, what skill s/he will have, and/or what behavior/values s/he will demonstrate at the end of the educational experience that will enable the student learner to achieve mastery of the competency. Enabling objectives (EO's) are statements of what the learner will do to achieve the mastery of the terminal objective. Several terminal objectives should be developed for each competency. Several enabling objectives should be developed for each terminal objective. Further information on objective development is provided later in this chapter and in Chapter 4.

IMPLEMENTATION PHASE

13.0 Determine Module Organization

The next two areas are some of the most important steps in the entire process of curriculum planning. Here the TO's and EO's are used to develop course syllabi, which relate the objectives to curriculum content areas. This is where content is selected and sequenced for progressive learning. Sources of material for course content include AMRA course outlines and educational program outlines. New content is needed as the profession changes and develops. Continuity of learning experiences should be provided for the learner so s/he can move logically from one instructional unit to another. Balance should be provided so that the curriculum provides a broad learning experience within the course parameters, followed by more specific learning experiences. Lastly, the format of the course content is developed. The planner decides how many course modules should be used, what each module should look like, and what information each module should contain. Sample modules developed for competencies are provided in the appendix to this chapter.

14.0 Develop Learning Activities to Support Enabling Objectives

In this step, instructional methods are developed which will utilize the individual learning preferences of students to enable the student to accomplish the objectives of the curriculum in the least amount of time. Additional information on this topic is provided in Chapters 5 and 6.

Criterion-referenced tests should also be developed to enable the instructor to measure student achievement and provide the student with meaningful feedback regarding his/her progress. Further information on criterion-referenced tests is available in Chapter 7.

15.0 Implement CBE Curriculum

A budget should be prepared to provide instructors and materials to implement the curriculum. An inservice workshop should be conducted to familiarize all faculty involved in CBE with specific curriculum plans. A consultant can facilitate the change process by conducting such a workshop. Medical record educators are also available for this purpose.

EVALUATION PHASE

This final phase measures the success of the curriculum planning and provides information for improvement or modification. During this phase the curriculum is evaluated. Evaluation of students is only part of this process. The curriculum is also evaluated by the students. Further information on evaluation can be found in this chapter.

16.0 Evaluate CBE Curriculum

All curriculum exists in a dynamic society whose needs are constantly changing. The curriculum process requires continual evaluation to maintain relevancy to student needs. Evaluation also measures whether the goals of the curriculum are being accomplished. Criteria should be developed to measure the achievement of goals. Instruments and procedures should be designed to conduct this evaluation. More information on this type of evaluation can be found in textbooks on curriculum evaluation.

17.0 Monitor and Evaluate Competencies

Learner mastery of competencies should be measured at the time of course or program exit. In-training examinations designed by the instructor can be developed for this purpose. Professional entry-level practitioners can also be monitored and evaluated through a competency-based certification process. Data about graduate performance on the certification examination will link performance to the competencies which are measured by the exam. Such information will provide invaluable feedback to program directors and instructors.

18.0 Revise Competencies

Professional competencies are dynamic. Society is changing rapidly and with it the medical record profession. If competency-based educational programs are to meet the needs of the profession, the profession must maintain on-going revision of competencies to maintain the relevance of the educational programs to the needs of the profession. Students, educators, and practitioners need to be involved in this on-going process under the leadership of the AMRA.

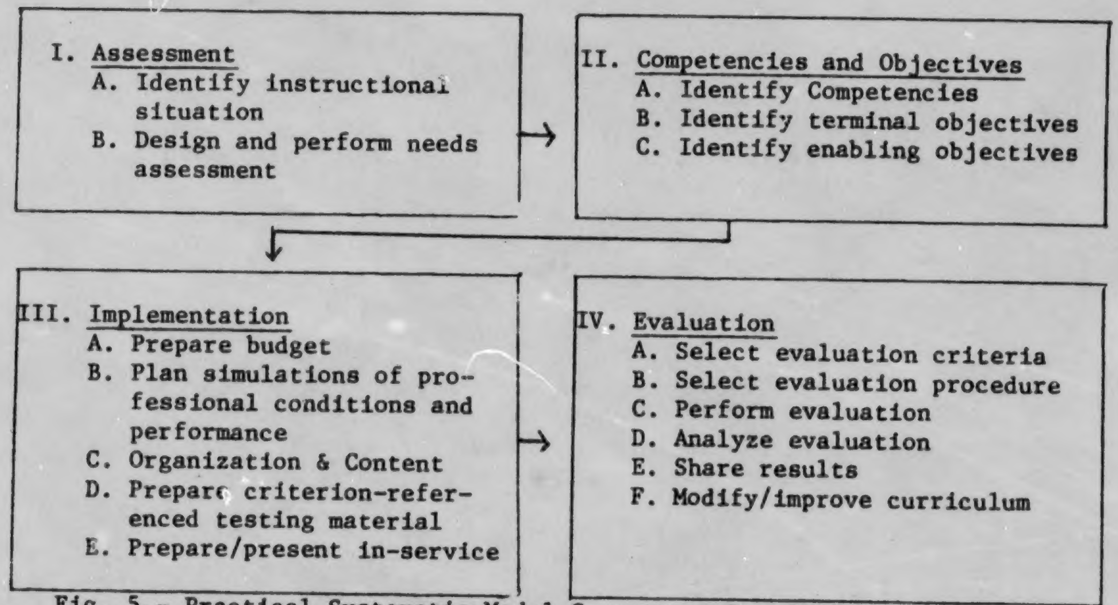
PART III

PRACTICAL MODEL FOR INDIVIDUAL COURSE DEVELOPMENT

Segall's Systematic Course Design for the Health Fields (1975) provides a step-wise approach to curriculum planning. The model presented here is a revised version which merges traditional curriculum planning with medical record program curriculum planning. It provides a step-wise approach to the development of an individual course. This is a curriculum planning model which can be used to produce a curriculum product. This product can be used by educators to present a course within the framework of a program.

There are five components to a competency-based learning system: 1) competencies, 2) performance objectives (terminal and enabling objectives), 3) criterion-referenced tests, 4) delivery systems, and 5) program evaluation. The following model demonstrates how these components can be organized into a four-phased competency-based curriculum design which can produce syllabi, teaching materials, and evaluation plans as well as objectives and competencies and other materials needed to present a course to students.

This four-phase model illustrates the steps necessary for course development. Educators may adapt all or part of this model as the needs of their particular program dictate. It follows the four phases found in most traditional curriculum planning models. It can also be adapted to traditional course planning by substituting goals and objectives for competencies and objectives.



I. Assessment
  A. Identify instructional situation
  B. Design and perform needs assessment

II. Competencies and Objectives
  A. Identify Competencies
  B. Identify terminal objectives
  C. Identify enabling objectives

III. Implementation
  A. Prepare budget
  B. Plan simulations of professional conditions and performance
  C. Organization & Content
  D. Prepare criterion-referenced testing material
  E. Prepare/present in-service

IV. Evaluation
  A. Select evaluation criteria
  B. Select evaluation procedure
  C. Perform evaluation
  D. Analyze evaluation
  E. Share results
  F. Modify/improve curriculum

Fig. 5 - Practical Systematic Model Competency-Based Educational Course Development (Modified Segall, 1975)
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I. Assessment Phase

The first step in designing curriculum is to identify the problem or needs to be resolved, and then determine what to do to solve the problems. Needs assessments can be informal or formal. The process involves identifying the issues related to the problem as well as deciding who can provide the information. It includes gathering and analyzing the information. An example of a problem or need is: what comeptenceis should students have as an end product of a medical terminology course?

A. Identify Instructional Situation

Before assessing needs, it is important to have a clear understanding of the instructional situation within which the course is to be presented.

Instructional situation: Context or framework where the course is to be prepared and presented including: (Segall et al, 1975)

Title - name of course

Purpose - major aim of course

Students - types of individuals taking this course, e.g., ART's in progression to RRA status

Location - where course will be presented

Resources - personnel, funds, equipment available for teaching

Constraints - limiting factors, e.g., budgeted funds, class size, number of class meetings

EXAMPLE:

Instructional Situation

Title: Medical Terminology I

Purpose: To enable students to interpret medical terminology in and related to patient medical records.

Location: Seattle University, Seattle, WA.

Resources: An instructor is available to spend 1/3 time on this course, including student advising. Audiovisual equipment is available within the department for use in all classrooms. Audiovisual materials available include slides, tapes, and flash cards. There are some funds available to purchase additional materials.

Constraints: The course is presented in two 1-1/2 hour blocks per week for 10 weeks. Students are expected to spend two hours of preparation for each hour of class time. Class size is limited to 25 students.

Fig. 6 - Example of Instructional Situation (Modified Segall, 1975)
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B. Design Needs Assessment

In competency-based education, the major problems are to describe the entry-level professional performance responsibilities and to select the student competencies that should result from this curriculum.

This process has two parts:

Part I	Part II
1. Describe ideal professional competencies	2. Describe actual professional competencies
a. Identify future professional roles	a. Actual performance analysis
b. List professional responsibilities	b. Identify discrepancies
c. Analyze knowledge, skill, and attitude aspects of responsibilities	c. Analyze reasons for discrepancies and modify ideal responsibilities

Fig. 7 - Two-part Needs Assessment Process

a. The first step in describing professional performance is to select the professional roles that entry-level practitioners are expected to assume.

Medical Record Administrators	- Assistant Director of large hospital medical record department - Long-term care consultant - Director of small hospital medical record department - Home health agency medical record department director
Medical Record Technicians	- Discharge analyst - Long-term care medical record department director - Coder - Tumor Registrar

Fig. 8 - Examples of professional roles for RRA's and ART's

b. Once the roles are selected, the instructor identifies the responsibilities of these roles that pertain to the course under development.

Examples:

Medical Record Administrator	1. Develop departmental budget 2. Supervise coders of diagnoses, procedures, and symptoms for data collection
Medical Record Technician	1. Code diagnoses, procedures, and symptoms for data collection and processing 2. Analyze medical records for completion

Fig. 9 - Examples of responsibilities

The 1981 AMRA update of the Roles and Functions study of 1978, presented in Chapter 2, identified the areas of major and specific responsibilities for entry-level practitioners. Professional responsibilities were organized by major responsibility area. These major responsibilitiy areas were then developed into two or more specific responsibilities for each major responsibility as shown in Fig. 10.

List professional responsibilities

Major responsibilities - e.g. Management

Specific responsibilities - Management - ART
- Follow existing procedures for departmental functions
- Maintain quantity and quality of departmental work using establish standards
- Apply existing policies for collecting and and processing health information

Fig. 10 - Steps in the Development of Responsibilities for CBE

The following example shows how responsibilities can be organized for a particular course. Responsibilities for both the MRA and MRT are included. This example provides only a partial list of responsibilities for Introduction to Health Information Systems. A complete list would be very lengthy and would vary from program to program.

Example:

LIST OF PROFESSIONAL RESPONSIBILITIES

Course Title: Introduction to Health Information Systems

Medical Record Administrator:

1. Interpret policies for collecting and processing health information to staff; i.e., department staff.
2. Review procedures for collecting and processing health information.
3. Revise pre-existing procedures for collecting and processing health information.
4. Update health data collecting and processing systems to assure that data meet institutional needs.
5.
6.

Medical Record Technician:

1. Apply existing policies for the retention of health information.
2. Follow existing procedures for the retention of health information.
3. Following existing procedures for collecting and processing health information.
4.
5.
6.

Fig. 11 - Examples of verified professional responsibilities (from Roles and Responsibilities Study, American Medical Record Association, 1981)

c. Analyze skill, knowledge, and attitude components

Once the professional responsibilities that pertain to the course being developed are selected, each responsibility should be clarified by asking the following questions: (Segall et al, 1975)

1) What knowledge is necessary?
2) What skills are needed?
3) What attitudes are valuable for competent performance of this responsibility?

Definitions

Knowledge: Facts, ideas, concepts needed to perform the responsibility.

Skill: Cognitive and motor abilities needed to perform the responsibility.

Attitudes: Values, personal traits, approach towards others that enhance the performance of the responsibility.

The instructor should include only the knowledge, skills, and attitudes essential to perform the responsibility. This will identify the elements needed to be covered in the course as well as enable the curriculum designer to clearly explain the purpose of each activity. Too many elements give the design a lack of focus. The next two pages provide examples of this process. The knowledge, skill, and attitude components of each responsibility are analyzed and presented in table form. While the components in each column are related with the responsibility under consideration, there is no specific relationship between items with the same number in the three parallel columns.

Fig. 12 - Example of a knowledge, skill and attitude analysis of a responsibility (RRA) (Modified Segall, 1975)

Course: Organization and Management (MRA)

RESPONSIBILITY: Establish long and short range departmental goals.

Knowledge	Skills	Attitudes
1. Principles of systems design.	1. Ability to write goals.	1. Perception of interrelationships between department and facility goals.
2. Long/short range goals of facility.	2. Ability to maintain good relations with management staff.	2. Willingness to work within framework of #1.
3. Available funding.	3. Analyze capabilities of equipment and project potential uses.	3. Creative imagination.
4. Trends in projected service changes - e.g., emergence of DRG's.	4. Analyze departmental needs, present and future.	4. Interest in change.
5. Space/personnel requirements.		5. Ability to accept compromise; revise goals based on changes.
6. Available equipment capabilities.		
7. Cost containment.		
8. Planning methodology, concepts.		
9. Budget review.		

Fig. 13 - Example of a knowledge, skill, and attitude analysis of a responsibility (RRA) (Modified Segall, 1975)

Course: Data Processing (MRA)

RESPONSIBILITY: Evaluate an automated system for collecting and processing health information for primary and secondary records.

Knowledge	Skills	Attitudes
1. Hardware and software capabilities.	1. Conduct feasibility study, evaluate present system; evaluate alternatives to present system.	1. Willingness to change.
2. Principles of system analysis.	2. Select best system.	2. Understand impact of change on employees.
3. Principles of data security.	3. Design selected system.	3. Attention to detail.
4. Health information systems methodology.	4. Implement selected system.	4. Assertiveness.
5. Medical record systems.	5. Evaluate system.	5. Cooperativeness.
6. Hospital-wide information systems.	6. Revise design.	6. Valuing confidentiality of patient information.
	7. Ability to work effectively with Data Processing in change process.	

Fig. 14 - Example of a knowledge, skill, and attitude analysis of a responsibility (MRT) (Modified Segall, 1975)

Course: Quality Assurance (MRT)

RESPONSIBILITY: Retrieve data for health records for quality assurance.

Knowledge	Skills	Attitudes
1. Medical science.	1. Research topic(s).	1. Attention to detail.
2. Principles of statistics.	2. Distinguish between valid and invalid criteria.	2. Commitment to accuracy.
3. Available sources to research topics.	3. Locate information for criteria.	3. Ability to take criticism.
4. Record format and content.	4. Legible handwriting.	4. Commitment to quality patient care.
5. Alternative sources of information - e.g. secondary records.	5. Match information against criteria.	5. Ethical.
6. Thorough understanding of criteria to be used.	6. Distinguish deviations from criteria.	

Fig. 15 - Example of a knowledge, skill, and attitude analysis of a responsibility (MRA) (Modified Segall, 1975)

Course: Quality Assurance (MRA)

RESPONSIBILITY: Gather data for use of medical/paramedical staffs in the development of criteria for evaluation of patient care.

Knowledge	Skills	Attitudes
1. Medical science.	1. Research topics.	1. Attention to detail.
2. Available sources to research topics.	2. Prepare preliminary data on topic.	2. Ability to take criticism.
3. Quality assurance system.	3. Utilize interviewing techniques to clarify criteria.	3. Assertiveness.
4. Methods of criteria establishment.	4. Ability to express self clearly in written or verbal form.	4. Willingness to work within political climate of institution.
5. Interviewing techniques.		5. Commitment to quality patient care.
6. Facility and personnel resources to assist in criteria development.		6. Ethical.
7. Understanding of politics of institution.		
8. Principles of research/ research methods.		
9. Principles of statistical research methods.		
10. Data presentation of graphics.		

2. Describe Actual Professional Performance

After developing a mastery description of the ideal professional responsibilities and the knowledge, skills, and attitudes necessary to perform these responsibilities, it is time to determine what the actual professional performance is in the local area. This prevents omission of responsibilities that may have been missed through the previous process.

a. Performance Analysis Methods:

The following are examples of suggested techniques that can be used to analyze performance:

- Questionnaire
- Interview of practitioners
- Checklist of tasks actually performed/completed by practitioners
- Observation at work sites

b. Identifying discrepancies:

Compare information obtained with responsibilities to determine: (Segall et al, 1975)

- Responsibilities identified previously that are performed differently or not at all
- Responsibilities not previously identified

c. Analyze responsibilities and modify original responsibilities if desired:

Once the ideal and actual performances have been identified, the curriculum designer should develop a final mastery description by deciding: (Segall et al, 1975)

- Should additional actual responsibilities be added to the course description?
- Should previously identified responsibilities be discarded or revised?

To make these decisions, the curriculum planner must decide why the discrepancy exists. Is it a local aberration? Has a new responsibility developed that was not previously identified? Does the actual performance measure up to the expected standard of performance of the medical record professional in this situation?

Once the reason the discrepancy exists is identified, a decision can be made whether to modify the mastery responsibility description. For example, the ideal mastery responsibility for a medical record department director includes "code diagnosis and procedures in ICD-9-CM." The performance analysis showed that this was not the case. The director does not code, but is responsible for supervising coders. Therefore, another responsibility -- *supervises coders* -- was added to the list for medical record department directors under this master responsibility.

II. COMPETENCIES AND OBJECTIVES

The product of Phase I is a mastery description of the responsibilities of a competent medical record practitioner that pertain to the courses being designed. During Phase II, entry-level professional competencies are selected for those responsibilities. Terminal and enabling objectives are then chosen for each competency that will enable the student to develop these competencies.

Some CBE educators develop competencies by starting with major responsibilities. From these they develop critical competencies. Critical competencies are general competencies similar to goals in traditional educational curricula. Critical competencies are then subdivided into Specific competencies. Specific competencies provide the measurable conditions and processes that must be carried out to achieve the critical competencies. Terminal objectives and enabling objectives are developed from the specific competency. Since AMRA has identified both major and specific responsibilities for the profession, we can use these data for the further development of competencies for individual educational programs.

A. Identifying Competencies

Using the responsibilities determined in Phase I, identify the competencies that pertain to these activities. Competency statements may include:

- conditions under which the responsibility is performed,
- performance that would be expected of a competent practitioner meeting this responsibility.

EXAMPLE:

1. Conditions
   - a) personnel involved
   - b) budgetary constraints
   - c) time constraints
2. Performance
   - a) How precisely?
   - b) How quickly?
   - c) How thorough?

Fig. 16 - Example of competency components

EXAMPLE:

Course Title: Medical Record Science for Medical Record Administrators

Responsibility: Develop specific procedures to ensure that confidentiality of patient medical information is maintained.

Competencies:

Condition	Performance (ability to)
1. Given the functions of a medical record department	--develop a system to maintain the privacy and confidentiality of health information.
2. Given announced changes in federal regulations	--incorporate applicable accrediting, regulatory and licensing requirements into policies and procedures for collection, processing, control, retrieval and use of health information.
3. Given the functions of a medical record department	--develop, analyze and revise, and implement departmental policies and procedures for processing medico-legal documents where appropriate.

Fig. 17 - Examples of competency statements

Competency statements may also include only the performance: An example of this type of competency follows:

Course Title: Medical Record Science for MRAs

RESPONSIBILITY: Supervise the control, use, and release of health information.

Competencies:

1. Advise personnel of the applicable legal, ethical, licensing, accrediting, certifying and institutional requirements for the control, use and release of health information.
2. Develop policies and procedures for the control, use and release of information based upon the legal, ethical, licensing, accrediting, certifying and institutional requirements of a health care facility.
3. Apply appropriate legal principles and procedures to situations affecting the control, use and release of health information.
4. Assess situations and/or circumstances affecting the control, use and release of health information which requires consultation with legal and/or administrative advisors.
5. Formulate an appreciation of the law and its impact on the health care system.
6. Recognize the standards of conduct that are consistent with valuing the confidentiality and privacy of health information as it relates to the patient, health care facility and professional staff.

Fig. 18 - Examples of competencies that do not specify the condition (Medical Record Administration Program, Ohio State University, 1981)

Another approach to competency was used by Hanken et al, (1980). Here competency statements are developed for general critical competencies. Critical competencies are broad statements of competence related to specific responsibilities. These critical competencies are then subdivided into several major competencies for each critical competency.

EXAMPLE: MRA Competencies in the Interpersonal Domain

Responsibility: Establish work flow in your area of responsibility within the data collection and processing system.

WORK ORGANIZATION AND DELEGATION

1. Critical Competency: Organizes and coordinates the work of subordinates with clear lines of authority and responsibility between people performing interdependent tasks, assures ways of monitoring and assessing performance, and for providing corrective feedback.

2. Major Competencies:

   a. Analyzes and evaluates health information needs and functions to break general tasks into well-defined sub-tasks including timelines to describe the interdependencies among people performing sub-tasks, and to communicate to subordinates what constitutes successful performance of the sub-tasks.

   b. Elicits information and ideas from subordinates, peers, and superiors to organize work responsibilities that meet the needs of the organization and its personnel.

   c. Works cooperatively with subordinates to define their responsibilities.

Fig. 19 - Competency statements; critical and major competencies (Hanken et al, 1980)

B. - C. Identify Terminal and Enabling Objectives

Once competencies have been determined the next step is the development of terminal performance objectives. These terminal objectives are more specific statements of the behaviors contained within the competency. Enabling objectives are then delineated, which provide steps the student will take to acquire the skills outlined in that terminal objective.

EXAMPLES:

T.O. The student will analyze information processing needs in a health care facility.

E.O.
- a. List and define the basic steps in systems analysis.
- b. List and apply steps used in production of a systems flow chart for a specific medical record function.
- c. Given hypothetical information, demonstrate ability to gather information on a computerized health information system by identifying major sources and uses of data and information.
- d. Given a case study from a health facility, organize the data into a systems flow chart.

Fig. 20 - Examples of terminal and enabling objectives without specified conditions

One or more terminal objectives should be developed for each identified competency. Once TO's have been selected, three or more enabling objectives should be developed for each terminal objective.

Following is a format that has been recommended by Segall et al, (1975) and by Anderson and Reding, (1979) for the development of terminal and enabling objectives. This format can be used by educators who write competencies without specifying the conditions under which they occur by placing the competency above the condition column in this format.

Terminal Objectives

Responsibility: #1. ______________________________

Conditions	Performance
Professional Competency:	
1. ____________________	
Terminal Objective	
1. ____________________	____________________
2. ____________________	____________________
3. ____________________	____________________

Fig. 21 - Format for development of Terminal Objectives (Anderson et al, 1979)

Enabling Objectives

Responsibility: #1.____________________________

Conditions	Performance
Professional Competency:	
1.____________________	
Terminal Objective:	
1.____________________	____________________
2.____________________	____________________
3.____________________	____________________
4. etc.	

Fig. 22 - Format for development of Enabling Objectives (Anderson et al, 1979)

The following examples (Figures 23-26), for entry-level ART and RRA practice, illustrate competency and behavioral objective statements in relation to a responsibility for each practitioner. Such a format can be easily incorporated into existing courses in program curricula.

Professional Competency, Terminal
and Enabling Objectives Appropriate
to Entry-Level ART Practice

Responsibility: Codes diagnoses, procedures, and symptoms for data collection and processing.

CONDITIONS	PERFORMANCE
Professional Competency: When given a variety of health records in a clinical setting...	...practitioners locate diagnoses, symptoms, procedures, assign appropriate code number(s), and record code number(s) in a predetermined location.
Terminal Objective: When given a variety of records of discharged patients and the ICD-9-CM Classification System...	...the student will determine the appropriate code number(s) for all diagnoses, symptoms, and procedures according to prelearned coding principles.
Enabling Objectives: When given... (a)...records of discharged patients (b)... (c)...	Student will... ...select the principle diagnosis in 75% of the cases.

Fig. 23 - Competency and Objectives Statements for Entry-Level ART (Anderson et al, 1979 adapted from Segall, 1975)

Professional Competency, Terminal and Enabling Objectives Appropriate to Entry-Level RRA Practice

Responsibility: Develops a departmental budget.

CONDITIONS	PERFORMANCE
Professional Competency:	
When given appropriate information...	...practitioners prepare a capital expense, personnel, and supply budget.
Terminal Objective:	
When given budget data from previous year and institutional guidelines...	...the student will forecast personnel needs, justify capital equipment, predict supply expenditures, and record on budget forms.
Enabling Objective:	
When given...	Students will...
(a)..."X"number of dollars	...adequately distribute money to personnel, supplies, and capital equipment, balancing allotted funds with expenditures.
(b)...	
(c)...	

Fig. 24 - Competency and Objectives Statements for Entry-Level RRA (Anderson et al, 1979 adapted from Segall, 1975)

LEGAL RESPONSIBILITIES

The medical record technician will be able to understand and apply legal regulations as they related to confidentiality and control of medical/health information. Emphasis must be placed on management of patient health information guided by policies, rules, standards, regulations, and legislation.

Competencies for Practice in Legal Responsibilities

* Demonstrating correct use of policies and procedures for use of patient medical information.

* Responding to requests for patient health information according to institution, state, and federal regulations.

* Monitoring health-related legislation for potential effect on health information practice.

* Evaluating use of consent forms and patient authorizations.

* Processing patient health information for legal proceedings.

1. Terminal Objective: The student will demonstrate knowledge of legislative, administrative, and judicial processes by applying knowledge to the following:

   Enabling objectives:

   a. Given specific examples, identify each of the following: an administrative rule/regulation, statutory law, and case law.

   b. Given a hypothetical situation, list means by which a medical record practitioner can have input into development and passage of laws and rules.

   c. Given published materials, abstract pertinent legislation which will impact health records.

continued

2. Terminal Objective: The student will demonstrate knowledge of and ability to utilize release of information policies.

Enabling objectives:

a. Given a variety of requests for information, discriminate between those requiring patient authorization and those mandated by legislation/regulation.

b. Given a request for information protected by alcohol and drug abuse legislation, explain orally and in written form the necessary steps for processing the release of information.

c. Given a request for transfer information, explain orally and in written form the necessary steps for processing the release of information.

d. Given a request for patient access to information, explain orally and in written form the necessary steps for processing the release of information.

3. Terminal Objective: The student will demonstrate understanding of the proper use of patient information by examining and evaluating organization policies and procedures needed to assure patient rights to confidentiality, legal release, and access to records.

Enabling objectives:

a. Given sample policies and procedures such as admitting, medical records, nursing, billing, medical staff, administration, and data processing, critique same for conformance to current legislation.

b. Demonstrate the proper method for making a correction to a medical record.

c. Given specific policies/procedures, demonstrate understanding of the concepts of confidential communication by evaluating these in regard to automated record systems and problems in special practices such as, transcription, coding, etc. outside facility, and taking medical records out of the facility

Fig. 25 - Sample Competency Area, Competencies, Terminal and Enabling (Behavioral) Objectives in Medical Record Technology (Anderson et al, 1979)

Course: Health Information Computer Systems

Responsibility: Evaluate and assist in the design of an automated system for collecting and processing health information for primary and secondary records.

Competency: Formulate goals, objectives, and a plan for a computerized health information system to meet current needs.

Terminal Objective: The student will assist in the development of a computerized Health Information System (HIS). (Anderson et al.)

Enabling objectives:

a. Given hypothetical information and resource constraints, select the basic elements of information to be included in a source document, and identify the source of data elements.

b. Given selected resources, identify the core content of admission and discharge statistics.

c. Given hypothetical information, analyze the data by documenting the following items: purposes, entry point, contributor, and users.

d. Given a case study, explain a planned computerized HIS to another health record professional using appropriate terminology.

e. Given a hypothetical description of a computerized HIS, outline the desired statistics to be generated by the computerized HIS for all prescribed users.

f. Given a description of a computerized HIS, explain to the systems analyst or programmer constraints related to patient privacy, confidentiality, and patient access.

g. Given one or more sample data input documents and computer output, analyze each in terms of established goals and objectives to a specific health record function.

h. Given sample flow charts, analyze each for content, sequence, and utility of information.

Fig. 26 - Example of TO's and EO's applied to a specific course: Health Information Computer Systems for MRA (Anderson et al, 1979)

Further details on selecting and developing objectives are presented in Chapter 4.

III. IMPLEMENTATION:

The third phase of curriculum design is the implementation. During this process, the competencies and objectives are sequenced and learning experiences are devised. The experiences are related to the basic themes of the profession and from these content areas are selected. Modules are developed to provide the learner with the opportunity to develop the desired competencies. In addition, a budget is developed and an in-service faculty orientation program should be prepared.

A. Budget

Budgetary constraints should be determined at this time as they will have an effect on the types of modules that can be developed for learning experiences.

B. Selection/Organization of Content

Content areas, within the parameters of the course topic, which enable learners to achieve mastery of the responsibilities/compentencies, have been identified previously (see Chapter 1). At this point, the sequential learning experiences needed to present the content to learners should be devised. These experiences should use the content material to enhance development of learner competencies and enable the student to accomplish the stated objectives. These learning experiences should be organized into a series of modules that grow sequentially on each other to develop comprehensive student understandings, skills, and values. These modules should allow the learner to move from module to module in each area as their experience and mastery dictates. This will provide flexibility for the diverse student body found in medical record programs whose work experience varies widely. An example of this application would be found in a progression program from ART to the RRA or two plus two program where experienced ART's can challenge modules which they feel they have already mastered. If they can successfully challenge the module, they can move on to the next sequential experience.

Within this section, the curriculum designer should review existing programs, collate teaching activities from many sources, and develop teaching activities and material. More information on teaching methods and materials can be found in Chapter 6 of this document.

Criterion-referenced testing materials should also be developed that provide a vehicle to be used for the measurement of the achievement of the terminal and enabling objectives. These test materials should be prepared before beginning actual instruction, and should be based on the performance objectives previously devised.

An example of the product of this process can be found in the Statistics and Patient Care Review module located in the appendix of this chapter. (See Appendix 1-2)

C. Plan Simulations of Professional Performance

This is one of the most critical stages in planning for successful student learning. This is the stage where instructional activities are devised to enable students to attain terminal competencies through learning experiences that "approximate the conditions and performance of the professional practice". The designer must: (Segall et al, 1975)

- define student entry-level competency,
- design instructional activities to enable students to attain terminal competencies,
- devise criterion-referenced tests for measurement of student competency attainment.

Student entry-level competency:

Student entry-level competency is defined as the competency that the student has when beginning the course. This relates to: (Segall et al, 1975)

- previous student work experience
- prerequisite courses
- previous educational experience
- life experiences

D. Prepare Criterion-referenced Testing Material

Part of the preparation of CBE curriculum is to prepare criterion-referenced testing material. These tests enable the instructor to measure student achievement against specific standards. These tests should be prepared prior to the presentation of the course. Criteria should be developed to measure student achievement of goals.

E. In-service Preparation

An in-service program should be developed and conducted to train the instructors who will use the program. Another purpose for conducting an in-service at this time is to demonstrate to the faculty what the curriculum includes, if they are not all involved in its preparation.

Preparation of an in-service is similar to preparing a course curriculum. The problems or focus should be determined. Materials and teaching methods should be devised to present the curriculum plan to the faculty. A time and location should be selected and publicized. The curriculum should be presented and explained. Feedback and evaluation should be part of the process, since a goal in presenting the in-service is to enlist the support of other faculty members, as well as to inform them of what the program will entail.

IV. EVALUATION

The final phase of curriculum course planning is evaluation of the course itself. Evaluation should be an ongoing process in curriculum design. Through evaluation one can:

- determine achievement of persons involved in the program,
- determine process effectiveness,
- determine cost effectiveness,
- report to the public,
- assist in further planning.

EXAMPLES:

Achievement: Were course goals achieved?
Process effectiveness: Did the learning progress smoothly?
Performance: Did students attain mastery?
Cost effectiveness: Was the course cost effective?
Reactions: How did the students perceive the course?
Usability: Are the TO's still pertinent for entry-level practitioners?
Strategies: Were the instructional strategies used effective?

Fig. 27 - Aspects to consider during evaluation

A. Selection of Evaluation Criteria

This includes selecting what will be used to measure the effectiveness of the curriculum. During this process, the curriculum, not the students, is evaluated.

An evaluation matrix can provide a structure for this process. It can show what needs to be evaluated and who can provide the answers. Evaluation can provide ongoing measures of the effectiveness of the series of learning experiences that constitute the curriculum. This process should involve faculty, students, and graduates. Information acquired through this process can lead to improved design and effectiveness. Figures 28 - 31 illustrate the procedure for the development and use of an evaluation matrix in the evaluation process.

APPLY SOME OF THE ASPECTS OF EVALUATION TO THIS ACCOUNTABILITY MODEL AND SEE IF YOU CAN IDENTIFY SOME MAJOR EVALUATION CONCERNS FOR YOUR CURRICULUM PROJECT:

	Aims/Goals	Actions	Accomplishments
Community	Priorities, wishes, desires	Involvement, support, participation	Satisfaction, pride
Students	Performance goals	Actual performance	Achievement: what you wanted to achieve
Administrators	Management responsibilities	Implementation of leadership/management strategies	Professional competence, administrative evaluation

Fig. 28 - Accountability Model: Seattle University School of Education, Graduate Curriculum Design Practicum course material, 1979

EXAMPLE:

MEDICAL SCIENCE CURRICULUM REVISION

EVALUATION CRITERIA MATRIX

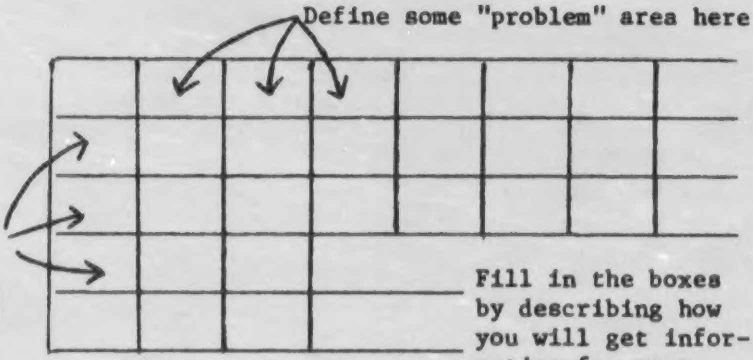
	AIMS	ACTIONS	ACCOMPLISHMENTS
STUDENT	Performance goals 1. Understand disease processes 2. Develop lifetime learning skills 3. Increased personal growth 4. Pass the medical science section of the RRA exam	Actual performance 1. Enrichment of classes by student voluntary action 2. Take RRA exam	Achievement: What you wanted to achieve 1. Pass RRA exam with grade above the national average 2. Pass course with high achievement 3. Understanding of disease processes 4. Improved learning skills
TEACHER	Professional goals 1. Improve teaching skills 2. Increase knowledge of content area 3. Keep abreast of current research and treatment 4. Continue personal growth 5. Enhance course teaching aids 6. Raise school RRA exam average	Instructional strategies 1. Adapt strategies to student needs 2. Read current journals 3. Continue study of content area 4. Prepare slides 5. Purchase slide/cassette units 6. Drill students in exam-taking skills	Professional competencies 1. Improved instructional skill 2. Increased depth of knowledge 3. Increased teaching aids 4. School average on RRA exam improves

Fig. 29 - Evaluation Criteria Matrix (Blide, 1980)

B. Select Evaluation Procedure

Select what is needed to measure achievement of the criteria established in A. Here again a matrix is a valuable tool for organizing the material.

EVALUATION MATRIX



Define some "problem" area here

Step One:

Think of persons who would know something about the "problem" areas. Write these "legitimate sources of input" here:

Fill in the boxes by describing how you will get information for your "legitimate sources of concern"

Step Two: Making questionnaires, designing interview questions and surveys, formulating timeline for administering tools, conducting the procedure.

Step Three: Recording the results of the surveys, interviews, etc.

Step Four: Drawing conclusions.

Step Five: Making recommendations.

Fig. 30 - Evaluation Matrix: Seattle University School of Education, Curriculum Design Practicum course material, 1979

EXAMPLE: This matrix shows the procedures that were used to evaluate the curriculum revision

MEDICAL SCIENCE CURRICULUM REVISION

EVALUATION PROCEDURE MATRIX

	Instructor Acceptance	Student Performance	In-service Effectiveness	Materials	Values
STUDENTS	Course evaluations; attitude survey	RRA exam grades, questionnaire to former students after one year of job experience	☒	Course Evaluation	Attitude Survey
DEPARTMENT HEAD	Interview	Interview	Interview	Interview	☒
FACULTY	☒	Interview	Interview	☒	☒
NON FACULTY	☒	Interview	Interview Class Enrollment	Interview	☒

Fig. 31 - Evaluation Procedure Matrix (Slide)

C. - F. Perform Evaluation; Analyze Evaluation; Share Results; Modify and Improve Curriculum

Once the evaluation is performed and the results analyzed, the results should be shared with other faculty involved in the course presentation. The final step is to use these data to modify and improve the course design. Curriculum design for CBE should be a dynamic process that changes with time as the profession develops. It is imperative that ongoing evaluation and updating of competencies by maintained for CBE programs to succeed.

The Segall model previously mentioned is an outstanding resource for CBE curriculum planners. It provides extensive information in implementation problems and methods to facilitate application as well as an overview of the course design model from which this model was derived. It can also provide the answers to many of the problems encountered in CBE program development and implementation.

SUMMARY

This chapter has provided an overview of the major aspects of competency-based education. It offers a theoretical and a practical framework for CBE curriculum development. Two complete student learning CBE examples can be found in the appendix of this chapter: one on form design and control for MRA Programs and one on graphing and displaying hospital statistical data for MRT programs. An annotated bibliography on CBE is provided as an instructor resource.

Competency-based, mastery-oriented curriculum can be effective. It addresses the issues of content and relevance. It provides opportunities for independent pacing by incorporating a variety of learning experiences which are specifically related to a defined competency and objective. It employs an assessment system aimed at maximizing the opportunity for all to succeed rather than assigning a grade. Lastly, it demands a greater commitment by faculty to facilitate individual student learning.

APPENDIX - CHAPTER I

The appendix consists of two competency-based modules provided as examples of curriculum products that result from the process described in Chapter 1.

These modules are:

- Forms design and control for medical record administration programs
- Graphing and displaying hospital and clinical data for medical record technician programs.

STUDENT LEARNING MODULE 1*

UNIVERSITY OF ILLINOIS
DEPARTMENT OF MEDICAL RECORD ADMINISTRATION

PHASE:	RECORD ADMINISTRATION
MODULE: 13A	387 FORMS DESIGN (1 credit)
PREREQUISITES:	361 THE MEDICAL RECORD 375 INTRODUCTION TO MANAGEMENT
EQUIVALENCY PROCEDURES:	Written examination - 80% achievement

MAJOR RESPONSIBILITY:

1.0 Management: Plan, direct, and control through the principles of management and the practice of medical records.

SPECIFIC RESPONSIBILITY:

1.1 Develop forms for administrative use.

COMPETENCIES:

Condition: When given a request for/or identifying a need for changing, initiating, analyzing, and/or controlling forms, the practitioner will be able to:

Performance (ability to)

1.11 Analyze, design, and plan for the production of primary and/or secondary medical record forms which are effective in collecting and recording health data and management information.

1.12 Establish effective measures for controlling medical record and medical record service forms to facilitate medical and administrative documentation and information storage.

TERMINAL OBJECTIVES:

Condition: When given sample form, the purpose of the form, access to authority standards for content, principles of forms design, forms specification parameters, cost considerations, and control mechanisms, the student will be able to:

Performance (ability to)

1.111 Design primary medical record forms which are effective for use in collecting and recording health data and management information.

Performance (ability to)

1.112 Design secondary medical record forms which are effective for use in collecting and recording health data and management information.

1.113 Design administrative forms which are effective in collecting and recording health data and management information.

1.114 Plan for the production of primary, secondary and/or administrative medical record forms which are effective in collecting and recording health data and management information.

1.121 Establish effective measures for controlling medical record and medical record service forms to facilitate medical and administrative documentation and information storage.

ENABLING OBJECTIVES:

Condition: When given a sample form, the purpose of the form, access to authority standards for content, principles of forms design, forms specification parameters, cost considerations, and control mechanisms, the student will be able to:

NOTE: Each enabling objective below is related to the first four terminal objectives listed above - 1.111, 1.112, 1.113, 1.114.

Forms Design

Taxonomic Level[b]	Item Number	Performance (ability to)
K (U)	1.11(1-4)1	Describe the purposes forms serve in collecting and recording data and communicating information.
K (U)	1.11(1-4)2	Explain the role patient care and administrative information systems play in the management of the health care facility.
K	1.11(1-4)3	Define terminology relating to forms and analysis.
AP	1.11(1-4)4	Apply principles related to arrangement of printed data, lines, and rules to forms design.
K	1.11(1-4)5	List various methods of recording data and consider their influence in construction of forms.
K	1.11(1-4)6	List and consider functional characteristics in forms design.

Taxonomic Level[b]	Item Number[a]	Performance (ability to)
		Forms Design
K	1.11(1-4)7	List and consider physical characteristics in forms design.
AN	1.11(1-4)8	Relate the five physical properties of paper to factors which influence paper selection in forms design.
C	1.11(1-4)9	Describe the various methods of printing forms.
E	1.11(1-4)10	Cite the advantages and disadvantages of both in-house and commercial printing of forms.
AP	1.11(1-4)11	Determine cost variations for the various methods of producing forms.
K	1.11(1-4)12	Differentiate between the various types of forms construction: single, stub, fanfold, and continuous.
K	1.11(1-4)13	List methods of producing multiple copies of a form.
K	1.11(1-4)14	List the steps involved in forms analysis.
S	1.11(1-4)15	Design a form applying the principles of forms design.
Note: Each enabling objective below is related to the last terminal objective listed previously 1.121.		**Forms Analysis & Control**
AN	1.1211	Analyze and correct deficiencies in medical record and medical record service forms in accordance with accepted guidelines.
E	1.1212	Evaluate the effectiveness of a specified form for use in a given situation.
E	1.1213	Select forms for medical record applications based on evaluation of functional and physical characteristics.
E	1.1214	Describe adequate means of controlling forms used in the medical record and medical record service.

[a] Key for the understanding of item numbering system:

1.	Major responsibility number
1.1	Specific responsibility number
1.11	Competency number
1.111	Terminal objective number (TO)
1.1111	Enabling objective number (EO)

The reader will note that the above system enables the reader to see how each TO and EO relates to a specific competency and responsibility. 1.1111 would be related to EO #1, related to TO #1, related to competency #1, derived from specific responsibility #1, derived from major responsibility #1.

[b] Taxonomic level key: K = knowledge, (U = understanding), C = comprehension, AP = application, AN = analysis, S = synthesis, E = evaluation

ACTIVITIES:

Lectures & Laboratories
9/23/80 Lab Introduction to Forms Design, Analysis, and Control

READING:

Liebler, Joan Gratto, Managing Health Records, Aspen Systems Corp., 1980.

Terry, George R., Principles of Management, Richard D. Irwin, Inc., 1977.

Selected Journal articles (available on reserve in library).

ASSIGNMENTS: (The following assignment is described in detail on the attached pages.)

Form Critique - Due: October 10, 1980

EVALUATION:

Item	Level of Achievement	% of Module Grade
Form Critique	80%	15%

Note:

This is one module from one syllabus from a special competency-based Medical Record Administration Curriculum for the University of Illinois. This module was modified by Blide to fit the ERD format for CBE teaching modules, for inclusion in Chapter 1 of the Educational Resource Document (1981). Copyright (C) 1976 by the Board of Trustees of the University of Illinois. All rights reserved - no part of this publication may be reproduced or transmitted, in any form or by any means without permission of the Head of the Department of Medical Record Administration.

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STUDENT LEARNING MODULE 2*

MRT 209 Statistics and Patient Care Review
MRT 211 Statistics Lab

TOPIC: Graphing and Displaying Hospital and Clinical Data

DAYS: 5
HOURS: 10

RESPONSIBILITY:

Prepare administrative and clinical statistical reports.

COMPETENCY:

After collecting data, practitioners select and graph data which should be graphed and displayed for the purposes of enhancing understanding and/or usefulness of the data.

TERMINAL OBJECTIVES:

By the end of this unit, you should be able to complete each of the following:

1. When given raw hospital/clinical data, the student will prepare an appropriate graph, displaying the data accurately and providing an explanatory caption.
2. When supplied sample graphs, the student will identify accurately design pitfalls according to previously learned principles.
3. Given one or more graphs, the student will interpret in a written format the meaning of the graphic data when asked questions; the student will share his interpretation orally with the class.

ENABLING OBJECTIVES:

In order to achieve the terminal objectives, the student will complete the following specific, enabling objectives:

1. Recognize, by name, four common types of graphs from samples provided.
2. Recognize and state at least two unique characteristics of each of the four common types of graphs.
3. Indicate uses and non-uses of the four basic graph types.
4. Equate symbols with basic terminology.

5. Define the meaning of basic terminology relating to graphs.

6. Determine the appropriate graph needed for given data to convey the greatest meaning.

CONTENT OUTLINE: Graphic Presentation of Data

I. Definition and Purpose

II. Graphic Presentation vs. Tabular Presentation

   A. Characteristics of each
   B. Uses and non-uses of each
   C. Advantages and disadvantages of each

III. Types of Graphs with Definitions, Characteristics, and Uses of Each.

   A. Bar/Double Bar
   B. Histogram
   C. Polygon
   D. Pie graph

IV. Construction Principles and Terms

   A. Choice of Graph
   B. Choice of Scale
   C. Graphing Conventions and Artistry

      1. Conventions

         (a) plotting frequency on the Y-axis and class intervals on the X-axis
         (b) placing the zero point for the origin at the X and Y intercept
         (c) making the height of the graph 66-75% of its width
         (d) labeling the X and Y axes
         (e) providing a figure caption

      2. Artistry

         (a) title
         (b) spacing
         (c) legend
         (d) source

   D. Misleading Graphs Due to Violations of Convention Rules

E. Terms

1. measurement
2. variable (quantitative, qualitative)
3. frequency, frequency distribution
4. nominal limits
5. real limits
6. range
7. ordinate
8. abscissa
9. X-axis
10. Y-axis
11. class interval
12. sample

IV. Commercial Supplies for "Customizing" Graphs

V. Analysis and Interpretation Principles

A. Existence of data has been verified
B. Definitions, calculations, methods used are correct
C. Information gathered is relevant to questions asked
D. Sample was selected randomly or is representative of a population

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STUDENT LEARNING MODULE

TOPIC: Graphing and Displaying Hospital and Clinical Data

INTRODUCTION:

In order to measure your attainment of terminal objectives 1-3, the following activities are provided. You may proceed at your own pace, checking your work as you go. This is not a test. It is expected, however, that the activity will be redone until it is correct.

MATERIALS NEEDED:

Unruled paper (provided)
Ruled paper, ruler
Colored pens/pencils, if desired
Calculator

TASK	KEY POINTS
1. Read carefully the attached Activity Sheet.	
2. Complete any item in Group I of interest to you and which will provide you experience in constructing one of each of the four graph types.	2a. Work which is neat and attractive is professional! 2b. Utilize your handout: "Steps in Graphic Design".
3. Check the accuracy of your final work for each graph with Student Activity Self-Check Keys kept by the instructor.	3. Review work orally with the instructor; if work must be redone, clarify your errors orally before beginning.
4. Complete each item in Group II and submit to your instructor for evaluation.	4. Your work should display how you arrived at your answers when necessary.

REFERENCES:

Notes, handouts
Any text available to you in Program Library or elsewhere
Lecture overheads and samples

STUDENT LEARNING MODULE

Instructions: See Student Operation Sheet

GROUP I

1. Given monthly late fetal death rates for a year, construct an accurate histogram.
2. Given survival times for 50 patients with adenocarcinoma of the breast as the primary site, construct a histogram.
3. Given systolic blood pressure on 50 myocardial infarction patients at first encounter, construct an accurate polygon.
4. Given the total admissions for a year by zip code, construct either a pie or bar graph.
5. Given surgery time for 50 nosocomial infection patients, construct either a polygon or a histogram.
6. Given the total number of hospital patient deaths due to suicide for a year, by age and sex, construct a double bar graph.
7. Given the total number of completed medical audits by Medical Staff Department for the past three years, construct a pie or bar graph.

GROUP II (Enrichment)

1. Given monthly nosocomial infection rates for a year, compute the three measures of central tendency, correctly labeling their position on a polygon graph.
2. Provided with a polygon on rates of occupancy for a year, interpret its content by answering correctly the following questions:
   (a) What month was occupancy the highest during the year?
   (b) What month was it the lowest?
   (c) What month(s) was it below 80%?
   (d) During what month did the hospital operate a "closed" admission?
3. Given the results of two medical audit studies, suggest at least one measurement which could be graphed for each; name the appropriate graph to be used, defending your choice.

STUDENT LEARNING MODULE

INSTRUCTIONS:

As a final activity in this unit, select one activity from the Activity Sheet (relating to a Histogram or Polygon) you have not already done; complete the activity and submit to your instructor.

REFERENCES YOU MAY USE:

Handout; "Steps in Graphic Design"
Previously completed lab work

GRADING CRITERIA:

1. Graphic design illustrates correct application of construction principles.
2. All data has been graphed correctly.
3. Work is neat and complete, containing the five required graphic conventions.

* Used with permission
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Chapter 2

Roles and Responsibilities of Medical Record Practitioners

INTRODUCTION

The purpose of this chapter is to provide information for medical record educators on the verified major and specific responsibilities of entry-level and experienced medical record practitioners at two levels - the RRA and the ART. The responsibilities listed in this document represent current finding, based on the 1981 update of the 1978 Verification of Roles and Responsibilities of Medical Record Personnel. These up-to-date verified responsibilities will serve as a basis for curriculum and course development for educational programs for the Medical Record Technician and Medical Record Administrator.

The chapter is composed of three sections. Part I provides a summary of role delineation and verification studies for the medical record field carried out by AMRA from 1957 to 1978. Part II describes the 1981 study of responsibilities of entry-level ARTs and RRAs, experienced practitioners, and responses from MRT and MRA educators. A complete listing is provided of specific responsibilities verified for entry-level RRAs and ARTs. An additional listing is provided of specific responsibilities verified for the experienced practitioners. Part III focuses on the use of the updated roles and responsibilities data by medical record educators. It describes pertinent survey findings on the job roles of medical record practitioners, work settings, analysis of specific responsibilities performed by practitioners, and consensus data from medical record educators. An analysis of the findings and implications for educators is included.

PART I

SUMMARY OF ROLE DELINEATION AND VERIFICATION STUDIES

Prior to the Educational Resource Document (ERD) Project, the American Medical Record Association (AMRA) was involved in three major studies of the roles and functions of medical record personnel.

The first study, requested and financed by the American Association of Medical Record Librarians (later renamed the American Medical Record Association), was The Functions and Education of Medical Record Personnel, (also known as the "Pittsburgh Study"), and was completed in 1957. Its aims were to determine the (1) functions performed by and considered necessary for the medical record practitioner, (2) knowledge and skills necessary to perform those functions, (3) adequacy of existing educational programs to produce skilled and knowledgeable practitioners, and (4) need for more than one classification in the profession, relative to education and responsibility. That first attempt to define and delineate the medical record practitioner's functions formed the basis for succeeding studies. That study identified the following functions:

1. Assistance to the Medical Staff
2. Development, Analysis, and Technical Evaluation of Clinical Records
3. Development of Secondary Records
4. Development of Statistics
5. Organization of Departmental Records - Integration and Coordination of Records and Reports
6. Preservation of Records
7. Education, Information, and Training
8. Management of Medical Record Department

Conclusions and recommendations of the Pittsburgh Study resulted in development of standards for organization and development of educational programs during the next fifteen years.

In 1973, the AMRA undertook a project which had several aims and produced several documents: (1) delineate the actual roles and functions of all medical record personnel; (2) identify the appropriate roles, functions, and responsibilities of those personnel; (3) develop a bank of behavioral objectives covering all areas of practice; (4) prepare a curriculum guide for educators; and (5) explore the feasibility of, or other options regarding, proficiency examinations for the profession.

The project, A Study to Delineate Roles and Functions of Medical Record Personnel (also known as the "Roles and Functions Project"), conducted and reported on two studies of roles and functions of the profession. One report, "Eighteen Years of Change - 1957 - 1975 Functional Changes in Medical Record Practice" (also known as the "Pittsburgh Update"), duplicated, as nearly as possible, the 1957 study. Its aims were to identify and document major changes in practice since 1957, and to document actual roles and functions of personnel. This "update" verified the functions of the 1957 study with one addition: Data Processing.

The profession, by this time, had clear definitions of two practicing professional groups, medical record administrator (MRA) and medical record technician (MRT). The study also determined there are five (5) roles common to both professional groups: administrator, supervisor, technician, consultant, and other (transcriber, clerk). This study also found that most verified functions were now delegated to the recently graduated, entry-level MRA supervisor or to the MRT who had several years' experience.

The second roles and functions study is presented and summarized in the Final Report of the Project completed in 1975. Aims of that study were to (1) provide validation information on the classification scheme, (2) identify overlapping and excluded items, and (3) improve the quality of the Bank of Behavioral Objectives. With the help of forty-seven (47) State Medical Record Associations, nineteen elements covering both the necessary knowledge base and the required functions and skills for the medical record administrator and the medical record technician were identified:

1. Management
2. Health Care Records
3. Health Information Systems
4. Information Storage and Retrieval
5. Quality Assurance Systems
6. Personnel Administration
7. Health Statistics
8. Legal Aspects
9. Classification and Indexing
10. Current Trends
11. Licensing, Certifying, and Accrediting Agencies
12. Medical Science
13. Medical Staff
14. Medical Terminology
15. Anatomy and Physiology
16. Admitting Functions
17. Transcription
18. Typing
19. Other

Roles of the two professional groups, MRT and MRA, remained essentially the same: consultant, administrator, supervisor, technician, transcriber, and clerk.

Another aim of the "Roles and Functions Project" was to address the area of affective characteristics (interests, attitudes, values, feelings) recognized as essential to professional practice. This task was delegated to the Indiana Medical Record Association (IMRA) who reported the following:

1. Definition of affect
2. Explanation of the importance of affect to the profession
3. Approach to affect management

The IMRA found AMRA's Code of Ethics to be useful as a measure of affect; however, they concluded that measures of values and attributes, in addition to the Code of Ethics, needed to be investigated, and that some measure of the affective component of role definition was needed.

The "Roles and Functions Project" formed the basis for the AMRA's third study, "Review and Verification of Roles and Functions of Medical Record Personnel," finished in 1978. This third study identified and defined nine major role and responsibility areas common to both groups of practitioners, the registered record administrator (RRA) and the accredited record technician (ART), as demonstrated in actual practice:

I. Management
To plan, organize, staff, direct, and control through the principles of management and the practice of medical record science.

II. Legal Aspects
To provide necessary service to assure that the legal aspects of medical record practice and institutional responsibility have been met.

III. Personnel Administration
To provide necessary leadership, direction, and documentation to effectively supervise people.

IV. Health Information Systems
To define and apply techniques used in the development and implementation of health information systems.

V. Health Care Records
To define and apply techniques necessary to assure collection of adequate health care data.

VI. Information Storage and Retrieval
To establish and maintain techniques for filing, maintenance, and acquisition of primary and secondary records.

VII. Health Statistics
To provide appropriate health, administrative, and clinical information.

VIII. Quality Assurance Systems
To support efforts to assure the quality of health care.

IX. Classification and Indexing Systems
To maintain adequate and accurate health care data through an acceptable classification and indexing system.

Within these nine major areas, the study verified forty-four (44) specific responsibilities for the RRA and forty-three (43) for the ART.

PART II

1981 UPDATE OF ROLES AND RESPONSIBILITIES OF MEDICAL RECORD PERSONNEL

In 1980, AMRA was awarded a contract for the creation of an Educational Resource Document. The foundation of this document is the verified roles and responsibilities for entry-level medical record practitioners. Recognizing that there are dangers in being locked into the results of a previous study (finished in 1978), AMRA undertook a limited update of the roles and responsibilities of practitioners.

Methodology

The two questionnaires used for the 1977-78 study were reviewed since the update study needed to incorporate the responsibility statements previously verified: 44 for the RRAs and 43 for the ARTs. Next, the Task Force conducted an in-depth review of those functions that had received a 32-39% score, almost up to the 40% level needed for verification; many were selected with or without revisions, for the pilot test. Finally, new items were developed for the functional areas of quality assurance, automation, cost containment, health information systems, and management.

In designing the new items, the Task Force followed the Table of Action Verbs used in the previous study (Chapter 4). The verbs in each block of statements thus represented the levels of the taxonomic hierarchy of educational objectives, ranging from the simple to the more complex levels of knowledge and skills required for performing each professional function.

The preliminary questionnaires were prepared for pilot testing; the Task Force and members of the project's Working Committee interviewed 24 entry-level practitioners (14 RRAs, 10 ARTs) and 19 supervisors at 28 facilities in the states of Michigan, Massachusetts, Georgia, Ohio, Indiana, Illinois, and Washington. The facilities in the pilot test included 17 acute care, 7 ambulatory care, and 4 skilled nursing facilities. After the pilot testing, one question was revised and several new ones adopted.

The AMRA staff used a sampling technique recommended by the consultant to determine the number of questionnaires to be distributed and to select the target survey recipients. In all, 1491 questionnaires were mailed to 6 groups of practitioners: entry-level RRAs, MRA educators, experienced RRAs, and ARTs at the same 3 levels. In order to try to identify trends in professional practice, the Task Force added experienced practitioners (defined as RRAs and ARTs who passed their examinations in 1975) to the survey.

Although the original plan called for extra questions for the experienced practitioners, the Task Force subsequently found there would be only 10 such items for RRAs and 14 for ARTs. The Task Force decided to use the same questionnaires for the entry-level and experienced practitioner - a move that provided a wider choice for entry-level respondents and permitted across-the-board comparisons of all responsibility statements. Excluding the demographic and affective items, the ART questionnaire had 87 statements and the RRA questionnaire had 116 statements.

The mailing consisted of the questionnaire, a letter of instruction for each of the six groups, and a glossary of action verbs. A follow-up postcard was sent to all recipients; in addition, a follow-up letter was mailed to the educators.

Return Rate

The overall response rate was 59.0% (880 responses out of 1491 questionnaires). The breakdown among the six groups responding was:

RRA entry-level	63.3%	ART entry-level	63.3%
RRA experienced	54.0%	ART experienced	49.4%
MRA educators	76.3%	MRT educators	66.6%

Results

The Task Force used the same criteria established in the previous study to analyze the data on the responsibility statements: for each statement that at least 40% of the respondents indicated was part of their practice responsibility, the Task Force took the action verb with the highest percentage to be verified.

For the entry-level ARTs, 42 of the 43 statements verified in the 1978 study were reverified without change; 1 was not reverified. Twenty new responsibilities were verified from 19 questions (for one generic function, two action verbs scored the same, so both were considered verified). In all, 62 responsibilities were verified for entry-level ARTs.

For the entry-level RRAs, 40 of the 44 previously verified responsibilities were reverified. The other four generic functions were reverified but with a change in the action verb to a higher taxonomic level. Fifty-six other responsibilities were verified, bringing the total to 100 verified responsibilities.

For the experienced ARTs, a total of 82 responsibility statements were verified.

For the experienced RRAs, a total of 115 responsibility statements were verified.

Tables of all verified responsibilities for entry-level and experienced ARTs and RRAs follow.

Table of Verified Major and Specific Responsibilities

Accredited Record Technicians
Entry-Level and Experienced

NOTE: All verified specific statements belong to a generic functional category which received a combined acceptance of 40% or over. The individual statement within the category which received the highest percentage of acceptance was considered verified. This explains the columns of percent acceptance.

	I. Management: To plan, organize, staff, direct, and control through the principles of management and the practice of medical record science.	Percent Entry-Level	Percent Experienced
1.	Report progress toward achieving long- and short-range goals.	27.5	30.6
2.	Prepare periodic reports on work production.	27.1	39.5
3.	Explain to superiors the need for new equipment.	24.5	—
4.	Follow existing procedures for departmental functions.	61.5	43.2
5.	Apply existing policies for collecting and processing health information.	51.5	52.7
6.	Apply existing policies for departmental functions.	51.0	39.9
7.	Apply existing departmental personnel policies.	45.5	40.1
8.	Maintain quantity and quality of departmental work using established standards.	69.0	66.2
9.	Perform quality assurance studies for medical record services.	28.5	33.8
10.	Maintain work flow in your area of responsibility within the data collection and processing system.	40.5	35.1
11.	Examine existing work flow in your area of responsibility within the data collection and processing system.	21.0	34.5
12.	Follow work flow within the department to identify gaps and overlaps.	18.6	—
13.	Prepare pertinent information for medical staff committees.	28.5	48.6
14.	Prepare report of the number of physicians' incomplete records for designated medical and administrative staff.	27.5	31.8

	I. Management: (Additional verified responsibilities for experienced ARTs)	Percent Experienced
1.	Analyze existing long- and short-range departmental goals.	24.3
2.	Revise (update) the organizational chart for the medical record department as needed.	32.4
3.	Evaluate the performance of subordinates using established criteria.	30.6
4.	Justify the need for new equipment.	33.8
5.	Analyze work flow within the department to identify gaps and overlaps.	32.0
6.	Analyze the results of work simplification studies.	19.0
7.	Prepare pertinent information for administrative committees.	45.3
8.	Conduct in-service training programs in medical records and medical record procedures for staff in other departments (including orientation of medical staff).	37.2

	II. Legal Aspects: To provide the necessary service to assure that the legal aspects of medical record practice and institutional responsibility have been meet.	Percent Entry-Level	Percent Experienced
1.	Follow specific procedures to ensure that the confidentiality of health information is maintained.	72.0	59.9
2.	Follow existing procedures for the control, use, and release of health information.	64.5	49.0
3.	Apply existing policies for the control, use, and release of health information.	54.0	42.9
4.	Follow existing procedures for the transmittal of health information to and from other health care facilities upon transfer of a patient.	61.8	59.2
5.	Follow existing procedures for reporting health information as required by applicable legal, accrediting, licensing, and certifying regulations.	56.0	55.1
6.	Follow existing procedures for the preparation and use of health information in legal proceedings.	41.5	44.9
7.	Follow procedures for handling authorizations requesting the release of health information to assure validity.*	51.0	43.8
8.	Respond to requests for health information.	47.5	39.5
9.	Retrieve records for release of health information.	24.5	—
10.	Select appropriate information for release.	24.5	—
11.	Locate information for reports for applicable legal, licensing, certifying, and accreditation agencies.	22.5	—
12.	Apply existing procedures for the preparation and use of health information in legal proceedings.	not tested	

*Requests for health information include legal documents, such as subpoenas and court orders, requests from attorneys, insurance companies, patients, etc.

II. Legal Aspects: (Additional verified responsibilities for experienced ARTs)	Percent Experienced
1. Supervise the release of health information.	46.3
2. Prepare reports for applicable legal, licensing, certifying, and accreditation agencies.	37.4

III. Personnel Administration: To provide the necessary leadership, direction, and documentation to effectively supervise people.	Percent Entry-Level	Percent Experienced
1. Write job descriptions in your area of responsibility.	35.0	55.4
2. Revise (update) job descriptions as needed.	49.0	66.9

III. Personnel Administration: (Additional verified responsibilities for experienced ARTs)	Percent Experienced
1. Interview personnel for medical record department in cooperation with department head and/or personnel department.	46.6
2. Institute employees regarding their responsibilities.	42.6
3. Evaluate responsibilities of immediate subordinates.	35.1

IV. Health Information Systems: To define and apply techniques used in the development and implementation of health information systems.	Percent Entry-Level	Percent Experienced
1. Apply existing policies for the manual or automated collecting and processing of administrative and clinical statistics.	38.5	49.0
2. Apply existing policies for the retention of health information.	53.5	48.0
3. Follow existing procedures for collecting and processing health information.	62.0	48.6
4. Follow existing procedures for the retention of health information.	64.5	54.7
5. Transcribe health care information.	24.0	—

IV. Health Information Systems: (Additional verified responsibilities for experienced ARTs)	Percent Experienced
1. Supervise word processing systems, i.e., transcription services, (includes supervising transcription personnel, proofreading transcribed report, monitoring transcription input and output, maintaining productivity log).	33.1
2. Supervise data collection and retrieval from computerized health information system.	24.3

V. Health Care Records: To define and apply techniques necessary to assure adequate health care data.	Percent Entry-Level	Percent Experienced
1. Follow the flow of patient care data within the institution to assure receipt in the medical record department	43.0	31.1
2. Follow existing procedures for the manual or automated issuing of patient I.D. numbers.	31.5	33.1
3. Apply existing policies for quantitative analysis of health records.	43.9	37.0
4. Follow existing procedures for quantitative analysis of health records.	48.7	39.9
5. Monitor accuracy of quantitative analysis of health records.	24.0	41.9
6. Maintain a locator file and sign-out system for incomplete records.	38.5	37.2
7. Report problems with forms usage.	27.5	—

V. Health Care Records: (Additional verified responsibilities for experienced ARTs)	Percent Experienced
1. Review the content of existing forms for secondary records.*	23.6
2. Evaluate the content of existing forms for primary records.	23.6
3. Design forms to meet new institutional needs.	37.2
4. Modify forms to correct problems.	29.7

*Secondary records include registries; indexes, such as physicians, disease, and operating indexes; and logs such as admission, operating and birth logs.

	Percent Entry-Level	Percent Experienced
VI. Information Storage and Retrieval: To establish and maintain techniques for the filing, maintenance, and acquisition of primary and secondary records.		
1. Maintain existing manual or automated filing systems for active and inactive primary records.	37.9	29.1
2. Organize secondary records to assure that they meet institutional needs.*	18.7	—
3. Maintain existing manual or automated filing systems for indexes and other secondary records.*	41.6	36.7
4. Follow existing procedures for the destruction of health records.	35.9	40.8
5. Apply existing policies for the retrieval of health information.	60.6	46.6
6. Follow existing procedures for the retrieval of health information.	68.7	55.4
7. Maintain existing manual or automated systems for the retrieval of health information.	47.5	39.9

*Secondary records include registries; indexes such as physicians, disease and operating indexes; and logs such as admission, operating, and birth logs.

	Percent Experienced
VI. Information Storage and Retrieval: (Additional verified responsibilities for experienced ARTs)	
1. Organize the space and equipment for filing and maintaining active and inactive primary records.	39.5
2. Develop a manual system for collecting and processing health information for primary and secondary records.*	23.8
3. Review secondary records to determine if they meet institutional needs.*	30.4
4. Supervise health record destruction activities.	19.0

*Secondary records include registries; indexes, such as physicians, disease and operating indexes, and logs such as admission, operating, and birth logs.

	Percent Entry-Level	Percent Experienced
VII. Health Statistics: To provide appropriate health, administrative and clinical reports.		
1. Prepare administrative and clinical statistical reports.	35.9	57.4
2. Abstract health records for the collecting and processing of statistical data.	49.0	41.2
3. Follow existing procedures for the manual or automated collecting and processing of administrative and clinical statistics.	46.7	46.6
4. Follow existing control procedures to assure the accuracy, consistency, and completeness of statistical data.	57.1	47.3

	Percent Experienced
VII. Health Statistics: (Additional verified responsibilities for experienced ARTs)	
1. Follow existing procedures for preparing vital statistics reports related to births and deaths.	27.7
2. Prepare tables, slides, graphs, etc., for the presentation of statistical data.	27.0

VIII. Quality Assurance Systems: To support efforts to assure the quality of health care.		
1. Review primary health records to determine if they meet institutional needs.	27.4	37.8
2. Retrieve data from health records.	43.4	32.4
3. Follow institution's policies and procedures for Quality Assurance.	35.9	48.0
4. Follow existing control procedures to assure accuracy and completeness of coded information.	55.3	50.0
5. Retrieve information for patient care evaluation studies.	34.0	—
6. Gather data for the use of the medical and para-medical staffs in the development of criteria for patient care.	31.8	39.9
7. Retrieve data from health records for research projects, special projects, special studies, and educational programs.	25.8	29.1
8. Abstract health care information.	45.9	39.2

	Percent Entry-Level	Percent Experienced
VIII. Quality Assurance Systems: (Additional verified responsibilities for experienced ARTs)		
1. Coordinate patient care evaluation activities.		29.7
2. Coordinate utilization review activities.		23.6
3. Screen health records for legal liability.		25.7
4. Identify information for use in the institution's Quality Assurance studies.		25.0
5. Retrieve information for institution's Quality Assurance studies.		30.4

	Percent Entry-Level	Percent Experienced
IX. Classification and Indexing Systems: To maintain adequate and accurate health care data through an acceptable classification and indexing system.		
1. Supervise health data collection and processing activities (e.g., coding, indexing, statistics, etc.).	17.2	33.1
2. Follow existing procedures for coding diagnoses, procedures, and symptoms.	65.2	43.9
3. Code diagnoses, procedures, symptoms for data collection and processing.	55.6	43.9

Table of Verified Major and Specific Responsibilities

Registered Record Administrators
Entry-Level and Experienced

NOTE: All verified specific statements belong to a generic functional category which received a combined acceptance of 40% or over. The individual statement within the category which received the highest percentage of acceptance was considered verified. This explains the columns of percent acceptance.

		Percent Entry-Level	Percent Experienced
I.	**Management:** To plan, organize, staff, direct, and control medical record services through the use of principles of management and the practice of medical record science.		
1.	Establish long- and short-range department goals.	42.8	75.3
2.	Plan physical environment of department, including the organization of personnel and equipment.	30.7	50.3
3.	Recommend changes in existing organizational units of the medical record department as needed.	25.6	—
4.	Develop departmental budget.	20.5	45.1
5.	Recommend to superiors the need for new equipment.	33.0	—
6.	Develop forms for administrative use in the medical record department.	36.3	51.0
7.	Organize departmental management reporting systems.	29.8	45.8
8.	Assess departmental operations to assure cost effectiveness.	23.3	40.5
9.	Evaluate progress toward achieving long- and short-range department goals.	38.8	51.0
10.	Develop policies for departmental functions.	54.0	78.4
11.	Incorporate applicable legal, ethical, accrediting, licensing, certifying, and institutional requirements into departmental policies and procedures.	42.1	66.9
12.	Revise existing policies for departmental functions.	40.0	35.7
13.	Revise existing procedures for departmental functions.	48.8	48.7
14.	Supervise the implementation of departmental policies and procedures.*	40.2	—
15.	Solve problems related to policies and procedures.	38.6	55.6
16.	Evaluate the effectiveness of policies and procedures for collecting and processing health information.*	39.1	60.4
17.	Establish quantity and quality standards for departmental work.	40.0	67.3
18.	Supervise quantity and quality of departmental work using established standards.	45.6	—
19.	Maintain quantity and quality standards for departmental work.	46.3	49.3
20.	Perform quality assurance studies for medical record services.	35.3	—
21.	Establish control procedures to assure accuracy and completeness of coded information.	32.6	45.4
22.	Develop work simplication studies.	32.6	40.5
23.	Assess the flow of patient care data within the institution to assure receipt in the medical record department.	27.9	—
24.	Establish work flow in your area of responsibility within the data collection and processing system.	50.7	65.6
25.	Rearrange work flow within the department after identifying gaps and overlaps.	39.5	47.1
26.	Revise existing work flow in your area of responsibility within the data collection of processing system.	34.6	—
27.	Prepare pertinent information for administrative committees.	40.5	42.5
28.	Prepare pertinent information for medical staff committees.	39.1	—
29.	Recommend procedures to meet the needs of other departments for licensure, certification, and accreditation, as those needs relate to medical record procedures or statistics.	22.8	34.6
30.	Communicate new developments in health records and health data systems to members of the medical record committee and appropriate staff members.	28.8	41.2

*includes determining if policies and procedures ensure conformance with applicable legal, ethical, accrediting, licensing, certifying, and institutional requirements.

I. Management: (Additional verified responsibilities for experienced RRAs)

		Percent Experienced
1.	Justify the need for new equipment.	49.7
2.	Revise existing organizational units of the medical record department as needed.	44.4
3.	Analyze variations from the departmental budget.	39.2
4.	Evaluate the effectiveness of departmental policies and procedures.*	46.8
5.	Evaluate existing policies for departmental functions.	35.7
6.	Appraise established standards for departmental work.	51.0
7.	Organize the flow of patient care data within the institution to assure receipt in the medical record department.	37.3
8.	Design quality assurance program for medical record service.	46.4
9.	Contribute to medical staff committee deliberations.	40.1
10.	Supervise directed practice activities for medical record students.	33.6
11.	Evaluate existing work flow in your area of responsibility within the data collection and processing system.	47.4

*Includes determining if policies and procedures ensure conformance with applicable legal, ethical, licensing, accrediting, certifying, and institutional requirements.

II. Legal Aspects: To provide the necessary service to assure that the legal aspects of medical record practice and institutional responsibility have been meet.

		Percent Entry-Level	Percent Experienced
1.	Develop policies for the control, use, and release of health information.	30.7	64.1
2.	Develop specific procedures to ensure that the confidentiality of health information is maintained.	42.3	78.0
3.	Incorporate applicable legal, ethical, licensing, accrediting, certifying, and institutional requirements into policies and procedures for the control, use, and retrieval of health information.	47.9	58.0
4.	Incorporate applicable legal, ethical, accrediting, licensing, certifying, and institutional requirements into data collecting and processing policies and procedures.	36.7	55.6
5.	Evaluate the effectiveness of policies and procedures related to the control, use, and release of health information.*	22.8	—
6.	Advise institutional personnel on applicable legal, ethical, licensing, accrediting, certifying, and institutional requirements for the control, use, and release of health information.	37.2	54.9
7.	Supervise the control, use, and release of health information.	55.3	43.3
8.	Determine the validity of authorizations requesting the release of health information.+	28.8	—
9.	Respond to requests for health information.+	33.0	—

*Includes determining if policies and procedures ensure conformance with legal, ethical, accrediting, licensing, certifying and institutional requirements.

+Requests for health information include legal documents, such as subpoenas and court orders, requests from attorneys, insurance companies, patients, etc.

II. Legal Aspects: (Additional verified responsibilities for experienced RRAs)

		Percent Experienced
1.	Plan effective policies and procedures related to the control , use, and release of health information.*	51.7
2.	Develop the requirements for validity of authorizations requesting the release of health information.+	47.3
3.	Analyze requests for health information.+	44.7

*Includes determining if policies and procedures ensure conformance with legal, ethical, accrediting, licensing, certifying and institutional requirements.

+Requests for health information include legal documents, such as subpoenas and court orders, requests from attorneys, insurance companies, patients, etc.

III. Personnel Administration: To provide the necessary leadership, direction, and documentation to effectively supervise people.

		Percent Entry-Level	Percent Experienced
1.	Write job descriptions for departmental positions.	44.7	55.9
2.	Revise (update) job descriptions as needed.	60.0	68.0
3.	Counsel employees regarding employment, performance, promotion, and termination.	28.8	41.8
4.	Comply with affirmative action regulations in hiring and promoting employees.	43.9	65.3
5.	Formulate responsibilities for immediate subordinates.	45.1	68.6
6.	Review existing responsibilities of immediate subordinates.	33.2	40.8
7.	Counsel employees regarding their responsibilities.	33.5	—
8.	Evaluate the performance of subordinates using established criteria.	38.1	64.7
9.	Point out to staff departmental personnel policies.	29.4	—
10.	Enforce health and safety regulations throughout the department.	37.6	48.7
11.	Organize in-service training programs.	53.5	60.8
12.	Develop in-service training programs.	52.3	63.4
13.	Conduct in-service training programs.	48.8	55.6
14.	Conduct in-service training programs in medical records and medical record procedures for staff in other departments (including orientation of medical staff).	36.9	54.7

III. Personnel Administration: (Additional verified responsibilities for experienced RRAs)	**Percent Experienced**
1. Formulate departmental personnel policies.	45.3
2. Rate employees regarding their responsibilities.	46.1

IV. Health Information Systems: To define and apply techniques used in the development and implementation of health information systems.	**Percent Entry-Level**	**Percent Experienced**
1. Develop policies for collecting and processing health information.	35.7	61.3
2. Point out to staff existing policies for the retention of health information.	27.4	—
3. Revise existing policies for collecting and processing health information.	27.2	32.0
4. Examine policies for the retention of health information.	25.1	—
5. Examine policies for quantitative analysis of health records.	31.6	—
6. Develop procedures necessary for collecting and processing health information.	33.3	45.3
7. Revise existing procedures for collecting and processing health information.	40.8	—
8. Revise procedures for quantitative analysis of health records.	29.8	36.2
9. Revise procedures for qualitative analysis of health records.	24.8	30.7
10. Update health data collecting and processing systems to assure that data meets institutional needs.	28.0	37.3
11. Apply procedures for collecting and processing health information.	27.9	—
12. Supervise health data collecting and processing activities (e.g., supervise coding, indexing, statistics, etc.).	33.3	—
13. Supervise data collection and retrieval from computerized health information system.	24.8	44.0
14. Evaluate a manual system for collecting and processing health information for primary and and secondary records.*	19.5	—
15. Evaluate an automated system for collecting and processing health information for primary and secondary records.*	15.5	32.7 & 36.7

*Secondary records include registries; indexes, such as physicians, disease, and operating indexes; and logs such as admission, operating, and birth logs.

IV. Health Information Systems: (Additional verified responsibilities for experienced RRAs)	**Percent Experienced**
1. Establish policies for the retention of health information.	45.3
2. Revise policies for quantitative analysis of health records.	42.0
3. Assess existing policies for the retention of health information.	34.2
4. Review procedures for collecting and processing health information.	43.6
5. Evaluate existing procedures for collecting and processing health information.	51.3
6. Develop a manual system for collecting and processing health information for primary and secondary records.	28.7
7. Design a proposal for cost effective word processing services and equipment.	25.3
8. Design health information systems and procedures to maximize hospital reimbursement.	25.3
9. Establish patient I.D. number assignment procedures.	24.7
10. Provide interdepartmental consultation services.	63.8
11. Evaluate the effectiveness of a computerized health information system.	48.7
12. Evaluate effectiveness (accuracy, turn-around time, etc.) of word processing services.	46.7
13. Evaluate health data collecting and processing activities (e.g., evaluate coding, indexing, statistics, etc.).	43.3
14. Evaluate primary health records to determine if they fulfill reimbursement requirements.	33.3

*Secondary records include registries; indexes, such as physicians, disease, and operating indexes; and logs such as admission, operating and birth logs.

	V. **Health Care Records:** To define and apply techniques necessary to assure adequate health care data.	Percent Entry-Level	Percent Experienced
1.	Contribute to the formulation of hospital policies, rules, and regulations regarding the content of health records (i.e., medical or clinical records).	31.3	57.3
2.	Analyze primary health records to determine if they meet institutional needs.	30.4	—
3.	Analyze health records.	43.7	—
4.	Monitor the accuracy of quantitative analysis of health records.	58.6	59.3
5.	Supervise health records analysis.	38.6	—
6.	Supervise the incomplete record control system.	34.7	—
7.	Report number of physicians' incomplete records to designated medical and administrative staff.	26.5	—
8.	Review the content of existing forms for primary records.	27.0	—
9.	Review the content of existing forms for secondary records.	22.8	—
10.	Design forms to meet new institutional needs.	34.4	42.7

	V. **Health Care Records:** (Additional verified responsibilities for experienced RRAs)	Percent Experienced
1.	Design (forms for) health records.	37.6
2.	Evaluate primary health records to determine if they meet institutional needs.	45.6
3.	Evaluate the content of existing forms for primary records.	33.3
4.	Evaluate the content of existing forms for secondary records.	32.7
5.	Discuss number of physicians' incomplete records with designated medical and administrative staff.	44.7
6.	Evaluate the effectiveness of health records analysis.	46.0
7.	Evaluate the incomplete record control system.	40.3

	VI. **Information Storage and Retrieval:** To establish and maintain techniques for the filing, maintenance, and acquisition of primary and secondary records.	Percent Entry-Level	Percent Experienced
1.	Plan effective methods for record retention.	38.3	56.4
2.	Recommend the space and equipment for filing, storage, maintenance, and retrieval of health information.	27.6	—
3.	Supervise the filing and maintenance of active and inactive primary records.	43.9	—
4.	Supervise the filing and maintenance of indexes and other secondary records.	41.1	40.9
5.	Supervise health information retrieval activities.	46.3	30.9
6	Revise existing procedures for the retrieval of health information.	29.1	38.3
7.	Evaluate information collected in research projects and special studies.	20.6	—

	VI. **Information Storage and Retrieval:** (Additional verified responsibilities for experienced RRAs)	Percent Experienced
1.	Justify the space and equipment for filing, storage, maintenance, and retrieval of health information.	38.3
2.	Design research projects or special studies utilizing health information.	29.5
3.	Evaluate the filing and maintenance of active and inactive primary records.	38.3

	VII. **Health Statistics:** To provide appropriate health, administrative, and clinical information.	Percent Entry-Level	Percent Experienced
1.	Gather information needed to fulfill specific health information reporting requirements related to applicable legal, licensing, and accreditation requirements.	42.3	42.0
2.	Prepare administrative and clinical statistical reports.	42.3	47.3
3.	Evaluate adequacy of institutional statistical reporting system.	18.2	34.0
4.	Apply control procedures to assure the accuracy, consistency, and completeness of statistical data.	26.6	—

VII. Health Statistics: (Additional verified responsibilities for experienced RRAs)	Percent Experienced
1. Develop procedures for preparing vital statistics reports related to births and deaths.	19.3
2. Formulate control procedures to assure the accuracy, consistency, and completeness of statistical data.	43.3

VIII. Quality Assurance Systems: To support efforts to assure the quality of health care.	Percent Entry Level	Percent Experienced
1. Follow institution's policies and procedures for Quality Assurance.	33.0	31.3
2. Indentify information for use in the instutution's Quality Assurance studies.	22.4	31.3
3. Retrieve information for institution's Quality Assurance studies.	25.1	—
4. Gather data for the use of the medical and para-medical staffs in the development of criteria for patient care.	28.4	30.7
5. Prepare forms and reports relating to patient care evaluation.	35.3	27.3
6. Retrieve information for patient care evaluation studies.	25.1	—
7. Supervise the collection of health care data for patient care evaluation.	26.0	44.0
8. Organize data from health records for research projects, special studies, and educational programs.	22.3	38.0

VIII. Quality Assurance Systems: (Additional verified responsibilities for experienced RRAs)	Percent Experienced
1. Coordinate patient care evaluation activities.	40.0
2. Interpret requirements for the institution's Quality Assurance activities.	29.3
3. Prepare report of findings from the Quality Assurance studies.	23.3
4. Coordinate utilization review activities.	28.0
5. Screen health records for legal liability.	28.7

IX. Classification and Indexing Systems: To maintain adequate and accurate health care data through an acceptable classification and indexing system.	Percent Entry-Level	Percent Experienced
1. Supervise health data collection and processing activities (e.g., coding, indexing, statistics, etc.).	38.6	39.6
2. Monitor the accuracy of coding.	45.6	59.7
3. Evaluate procedures for coding diagnoses, procedures, and symptoms.	24.7	—

IX. Classification and Indexing Systems: (Additional verified responsibilities for experienced RRAs)	Percent Experienced
1. Develop policies and procedures for coding diagnoses, procedures, and symptoms.	43.2
2. Participate in the *analysis* of a classification system for diagnoses, procedures, and symptoms.	30.9

PART III

THE USE OF UPDATED ROLES AND RESPONSIBILITIES DATA BY MEDICAL RECORD EDUCATORS

Medical record educators are constantly challenged to provide instruction relevant to student needs, i.e., learning which facilitates effective performance by students in their subsequent professional and technical roles. To offer relevant medical record education it is necessary to (1) identify the various kinds of roles students will assume after completing their education, (2) analyze actual professional and technical medical record practice to identify the tasks currently associated with a given professional or technical role, and (3) identify trends in medical record practice.

To analyze actual professional performance, a method must be selected which allows one to assess what practitioners are doing, what they are not doing, and is feasible in terms of time, money, and personnel. Performance analysis methods which may be utilized include: questionnaire, log diary, check list, observation interview, and individual or group interviews.

The setting for professional practice in identified roles must also be considered. For example, the role of Director of Medical Records in a 300-bed hospital differs from the role of the Director of Medical Records in a health maintenance organization or in a 400-bed nursing home. The setting often determines how the responsibilities of a professional or technical role are executed. For example, "the process of organizing the flow of patient care data to assure receipt in the medical record department" is much simpler in a small health maintenance organization than in a 300-bed teaching hospital.

Due to resource limitations, medical record educators often simply survey their graduates to determine the kinds of jobs they are holding and the settings in which they are employed. They also usually ask their graduates and affiliation supervisors to prepare lists of the daily tasks they perform, in order to identify the practices associated with a given professional or technical role. The scope of information obtained in this manner is often inadequate, for only medical record practice in a limited geographic area may be represented.

The development of a complete set of analyzed responsibilities is the next step in curriculum design. This step is completed by conducting a careful analysis of the tasks or responsibilities being performed by credentialed record administrators and technicians. During the analysis process, educators may discard responsibilities performed by only a few individuals, add responsibilities which may be specific to practice in some roles or localities, or modify responsibilities if different or better ways of discharging these responsibilities are identified. Thus, the final set of responsibilities is developed from task lists modified by personal, subjective faculty judgment, which may or may not be supported by other subject matter experts. Sometimes more formal objective judgments are arrived at through consensus, that is, holding meetings or submitting questionnaires to obtain the combined judgments of qualified persons.

After completion of these steps, a curriculum may be designed which delineates learning experiences designed to assist students develop the knowledge, skills, and attitudes required to perform the complete set of responsibilities usually associated with the medical record technician or medical record administrator role.

SUMMARY OF RESULTS - 1981 UPDATE OF ART AND RRA ROLES AND RESPONSIBILITIES

This project provides medical record educators with a vast amount of data to assist them in developing relevant medical record education. Interviews to solicit information about job responsibilities were conducted with 24 entry-level practitioners and 19 experienced practitioners. In addition, mail questionnaire responses were obtained from 216 entry-level RRAs, 160 experienced RRAs, 202 entry-level ARTs, 149 experienced ARTs, 42 medical record administration educators and 55 medical record technician educators. This project provides educators with information to facilitate the design of a relevant medical record curriculum for medical record practitioners.

Information is first presented on current positions and then on areas of specialty practice. Entry-level and experienced ARTs include both academic and correspondence course graduates.

(See figure on following page.)

JOB ROLES - CURRENT POSITIONS

Entry-level ARTs	%
Administrator of Dept.	17.7
Assistant Administrator	8.1
Supervisor	19.2
Technician	40.9
Transcriptionist	13.6
Other	0

Experienced ARTs	%
Administrator of Dept.	37.7
Assistant Administrator	15.8
Supervisor	18.5
Technician	26.7
Transcriptionist	1.4
Other	0

Entry-level RRAs	%
Administrator of Dept.	35.5
Assistant Administrator	31.3
Supervisor	20.6
Technician	9.8
Transcriptionist	2.3
Other	.5

Experienced RRAs	%
Administrator of Dept.	74.7
Assistant Administrator	19.9
Supervisor	2.7
Technician	2.1
Transcriptionist	0
Other	.7

AREAS OF SPECIALTY PRACTICE

Entry-level ARTs	%
Director	12.0
Assistant Director	6.0
Supervisor	22.2
Quality Assurance Coordinator	20.5
Tumor Registrar	6.0
Consultant	5.1
Other	28.2

Experienced ARTs	%
Director	27.9
Assistant Director	11.5
Supervisor	14.4
Quality Assurance Coordinator	26.0
Tumor Registrar	1.9
Consultant	1.0
Other	17.3

Entry-level RRAs	%
Director	28.8
Assistant Director	26.4
Supervisor	18.4
Quality Assurance Coordinator	15.3
Tumor Registrar	.6
Consultant	.6
Educator, MRA	.6
Educator, In-Service	.6
Other	8.6

Experienced RRAs	%
Director	61.8
Assistant Director	11.0
Supervisor	3.7
Quality Assurance Coordinator	6.6
Consultant	5.1
Educator, MRA	5.9
Educator, MRT	2.2
Tumor Registrar	0
Other	3.7

WORK SETTINGS

This study revealed that the majority of entry-level and experienced medical record administrators are employed in short-term health care facilities. However, 6 percent of new RRA graduates are employed in long-term care facilities; 4 percent in free standing ambulatory care facilities; 2 percent in PSRO; and 13 percent in "other" facilities. This distribution does not change significantly for experienced personnel.

The majority (72.4%) of entry-level medical record technicians and experienced medical record technicians (75.5%) are also employed in short-term health care facilities. More entry-level ARTs (10.6%) are employed in long-term care facilities than entry-level RRAs (6%). However, similar to the proportion of RRAs in like facilities, 4.5% of entry-level ARTs are employed in ambulatory care facilities; 1.0% in PSROs; and 11.6% in "other" facilities. Experienced ARTs present a similar employment pattern.

These findings indicate that the acute care hospital represents the primary employer of medical record employees with three of every four practitioners employed in short-term hospitals. The educational curriculum must, therefore, offer theoretical and practical instruction on the health information needs of many types of health care facilities if it is to be relevant to the needs of students.

RESPONSIBILITIES PERFORMED

Interview and questionnaire responses identified the responsibilities RRAs and ARTs are performing. Practitioners provided this information by selecting the statement in each block of statements which best represented their responsibilities. The statements identified varying levels of Bloom's taxonomic hierarchy of educational objectives. This classification system presents six levels of learning activities beginning with Level 1, Knowledge, through Level 6, Evaluation. The action verbs that apply to each level of learning are listed in Chapter 4 (see p.147). For example, from the following block of statements, respondents were to identify whether they:

(a) Establish long- and short-range department goals.
(b) Assess long- and short-range department goals.
(c) Identify department goals to staff.
(d) None of the above apply to your role.

The taxonomic verb levels represented by the above statements were:

Identify - a level 4 verb representing analysis
Establish - a level 5 verb representing synthesis
Assess - a level 6 verb representing evaluation

Educators need to devote particular attention to the level of performance specified in the responsibility statements chosen by entry-level practitioners. Learning experiences must be designed to provide students with opportunities to develop competencies at the appropriate level. This study also provides the educator with information on the responsibilities performed at the experienced level. The following review of the verified responsibilities for Legal Aspects illustrates the additional information provided to the educator on experienced level practice.

ARTs were presented ten Legal Aspects items and asked to identify for each item the responsibility which most closely described their practice. The behaviors selected in each item by the greatest percentage of entry-level and experienced respondents are listed below in rank order by entry-level responses.

	Verified by Entry-Level ART %	Verified by Experienced ART %
1. Follow specific procedures to ensure that the confidentiality of health information is maintained.	72.0	59.9
2. Follow existing procedures for the control, use, and release of health information.	64.5	49.0
3. Follow existing procedures for the transmittal of health information to and from other health care facilities.	61.8	59.2
4. Follow existing procedures for reporting health information as required by applicable legal, accrediting, licensing, and certifying regulations.	56.0	55.1
5. Apply existing policies for the control, use, and release of health information.	54.0	42.9
6. Follow procedures for handling authorizations requesting the release of health information to assure validity. (Requests include legal documents, such as subpoenas and court orders, requests from attorneys, insurance companies, patients, etc.)	51.0	43.8
7. Respond to requests for health information.	47.5	39.5

	Verified by Entry-Level ART %	Verified by Experienced ART %
8. Follow existing procedures for the preparation and use of health information in legal proceedings.	41.5	44.9
9. Retrieve records for release of health information.	24.5	-
10. Select appropriate information for release.	24.5	-
11. Locate information for reports for applicable legal, licensing, certifying, and accreditation agencies.	22.5	-

The experienced ARTs verified the same responsibilities as the entry-level ARTs through item 8. The following additional statements were verified only by the experienced ARTs:

9, 10. Supervise the release of health information. (This response represents the third choice in this item, for entry-level ARTs chose the other two alternatives equally.) 46.3%

11. Prepare reports for applicable legal, licensing, certifying, and accreditation agencies. 37.4%

The additional items verified by the experienced ARTs can be used by educators in designing training experiences to prepare students for their professional responsibilities beyond the entry-level.

Nine items were presented to entry-level and experienced RRAs, so they could delineate their Legal Aspects responsibilities. Their responses indicated they performed the following responsibilities:

	Verified by Entry-Level RRA %	Verified by Experienced RRA %
1. Supervise the control, use, and release of health information.	55.3	43.3
2. Incorporate applicable legal, ethical, licensing, accrediting, certifying, and institutional requirements into policies and procedures for the control, use, and retrieval of health information.	47.9	58.0

	Verified by Entry-Level RRA %	Verified by Experienced RRA %
3. Develop specific procedures to ensure that the confidentiality of health information is maintained.	42.3	78.0
4. Advise institutional personnel on applicable legal, ethical, licensing, accrediting, certifying, and institutional requirements for the control, use, and release of health information.	37.2	54.9
5. Incorporate applicable legal, ethical, accrediting, licensing, certifying, and institutional requirements into data collecting and processing policies and procedures.	36.7	55.5
6. Respond to requests for health information.	33.0	-
7. Develop policies for the control, use, and release of health information.	30.7	64.1
8. Determine the validity of authorizations requesting the release of health information.	28.8	-
9. Evaluate the effectiveness of policies and procedures related to the control, use, and release of health information.	22.8	-

Experienced RRAs identified and verified different responsibilities for the following items:

Item 6:	Analyze requests for health information.	44.9%
Item 8:	Develop the requirements for validity of authorizations requesting the release of health information.	47.3%
Item 9:	Plan effective policies and procedures related to the control, use, and release of health information.	57.1%

The additional verified responsibilities for the experienced RRA provide direction to the medical record educator on the competencies their students will require beyond the entry-level stage.

The Action Verb Tables in the appendix to this chapter show that entry-level ARTs primarily *follow* existing procedures and *apply* existing policies to control and release health information. Educational programs for medical record technicians, therefore, need to offer learning experiences that provide students with procedures and policies for the control and release of health information and assign them to select appropriate information for release in conformity with these policies and procedures. Entry-level medical record administrators, however, are responsible for *developing* policies and procedures and *incorporating* new legal, ethical, licensing, accrediting, certifying, and institutional requirements into policies and procedures for the control, use, and retrieval of health information. Therefore, educational programs for medical record administrators need to offer additional learning experiences which give student medical record administrators new laws and/or regulations and assign them to incorporate these new laws and/or regulations into policies and procedures for the control, use, and retrieval of health information. The learning experiences specified for each group facilitate effective performance in their subsequent professional roles. Using the additional responsibilities verified by the experienced practitioner, medical record educators can prepare their students for current and future practice.

By analyzing the questionnaire responses to all the items in a specific content area such as Legal Aspects, the educator may develop a set of responsibilities which can be analyzed and utilized to develop the content and learning activities for a Legal Aspects course. In the analysis process, the educator may discard responsibilities performed by only a few individuals, such as the entry-level ART responsibility of retrieving records for release of health information. Additional responsibilities may be added from those performed by experienced personnel or responsibilities which are commonly performed in the locale where an educational program is located. For example, students could be expected to develop the requirements for validity of authorizations requesting the release of health information.

The course designer should clarify the meaning of each responsibility by describing its components. For each responsibility the following questions must be answered: When a competent practitioner executes this responsibility,

(a) What skills are necessary?
(b) What knowledge is involved?
(c) What attitudes are developed?

A medical record educator might utilize one of the identified responsibilities as a capability or expertise which could be expected of students at the end of and as a result of the instructional experience, i.e., *a terminal student competency*. Writing job descriptions is a specific responsibility identified for both entry-level ARTs and RRAs. Therefore, the terminal competency could be "*write complete job descriptions for medical record department positions*." Sample knowledge, skills, and attitudes involved in developing this competency include:

Knowledge: Define authority and responsibility.

Identify the four components of a job description and the content of each component.

Skills: Interview employee to develop a comprehensive list of the specific duties performed.

Attitudes: Sense importance of thoroughness and accuracy in recording interview data.

Sympathetic to employee's anxiety.

IMPACT OF NEW REQUIREMENTS

The impact of new Joint Commission on the Accreditation of Hospitals requirements on the medical record department and medical record education is also reflected in the questionnaire data. The following questions were included in both the ART and the RRA questionnaire with this response:

	Entry RRA %	Experienced RRA %	Entry ART %	Experienced ART %
(a) Design quality assurance program for medical record service.	22.8	46.4	5.5	26.4
(b) Perform quality assurance studies for the medical record service.	35.3	20.3	28.5	33.8
(c) Analyze results of quality assurance studies for medical record service.	11.2	15.7	6.5	13.5
(d) None of the above apply to your role.	30.7	17.6	59.5	26.4

Currently, entry-level practitioners primarily *perform* quality assurance studies for the medical record service, while experienced medical record administrators *design* quality assurance programs for the medical record service. The percentage of both experienced and entry-level personnel involved in *analyzing the results* of quality assurance studies for the medical record service is small. This response probably reflects the current state of the art. Most medical record departments are still designing their quality assurance programs; thus, few results are available for analysis. However, students need to be prepared to perform this responsibility, as they will be expected to carry out this responsibility in the future.

RESPONSIBILITIES RARELY PERFORMED

Responses to the following item indicate that only a small number of entry-level and experienced medical record administrators and medical record technicians are involved with maintaining, organizing, or analyzing special registries:

	Entry RRA %	Experienced RRA %	Entry ART %	Experienced ART %
Maintain existing special registries (e.g., tumor, stroke, and/or trauma registries).	10.3	9.4	15.7	18.4
Organize existing special registries (e.g., tumor, stroke, and/or trauma registries).	8.4	14.8	3.0	3.4
Analyze existing special registries (e.g., tumor, stroke, and/or trauma registries).	7.9	14.1	2.5	8.8
None of the above apply to your role.	73.4	61.7	78.8	69.4

Medical record educators must analyze this response as it relates to the settings in which program graduates are employed. The curriculum may not need to devote extensive time to the development of special registry competencies as it appears that few graduates are performing this responsibility. Some health care facilities participate in state registries and/or data abstracting services; personnel in those facilities would not be responsible for maintaining, organizing, or analyzing special registries but would be responsible for submitting abstracted data.

Responses by entry-level RRAs to the following items indicate that the impact of word processing and computer technology on their responsibilities is limited:

Examples:	Entry-level RRA %	Experienced RRA %
1. a) Supervise word processing services (i.e. transcription services). Includes supervising transcribed reports, monitoring transcription input and output, maintaining productivity log.	20.5	16.0
b) Evaluate effectiveness (accuracy, turn-around time, etc.) of word processing services.	15.3	46.7

	c) Compare word processing services (i.e. transcription services) with literature and/or other health facilities.	3.7	5.3
	d) None of the above apply to your role.	60.5	32.0
2.	a) Calculate costs of word processing services and equipment.	5.1	7.3
	b) Justify proposal for cost effective word processing services and equipment.	14.0	24.0
	c) Design a proposal for cost effective word processing services and equipment.	7.4	25.3
	d) None of the above apply to your role.	73.5	43.4
3.	a) Edit output from computerized health information system.	8.8	14.0
	b) Supervise output from computerized health information system.	11.2	8.0
	c) Evaluate the effectiveness of a computerized health information system.	15.3	48.7
	d) None of the above apply to your role.	64.7	29.3

However, evaluation and design activities currently do characterize the level of involvement for the experienced RRA and medical record educators will want to educate their students to perform responsibilities associated with modern technology.

EXPERIENCED PRACTITIONERS

This study provides a large amount of data on the roles performed by the experienced RRA and ART. The experienced ARTs verified 82 specific responsibilities from 87 blocks of statements representing functional responsibilities. The five functional responsibilities rejected were in the following areas:

1. Departmental budget
2. Directed practice activities for medical record students
3. Automated systems for collecting and processing health information
4. Special registries, e.g. tumor, stroke, and/or trauma
5. Instituting institutional Quality Assurance activities

The experienced RRAs verified 115 responsibilities. Only one functional responsibility was rejected, one functional responsibility was verified by two responsibility statements, and one statement was verified twice in two different items. The rejected functional responsibility was the same as that rejected by the experienced ARTs:

> Maintain, organize, or analyze existing special registries *(e.g., tumor, stroke, and/or trauma registries).*

These verified responsibilities can be used to provide a profile of the experienced RRA and ART today.

CONSENSUS DATA FROM MEDICAL RECORD EDUCATORS

Educators in both levels of medical record programs responded to the items on the appropriate questionnaires from the standpoint of what they were educating medical record students to do. Their responses indicate medical record administration educators are very consistent in what they are educating medical record administration students to do. On the 133 items included in the RRA questionnaire, medical record administration educators chose the same response over 50 percent of the time, on 92/133 items. In most items where 50 percent agreement was not achieved, medical record educators failed to agree on the specific behavior *(taxonomic verb level)* expected of students.

Example:	Educator RRA	Entry RRA	Experienced RRA
Evaluate departmental personnel policies.	43.9%	19.6%	19.3%
Formulate departmental personnel policies.	48.8	20.6	45.3
Point out to staff departmental personnel policies.	7.3	29.4	24.0
None of the above apply to your role.	-	30.4	11.3

Although about equal numbers of educators and entry-level RRAs selected evaluate and formulate, experienced RRAs selected formulate. This response supports the inclusion in the medical record curriculum of learning experiences requiring students to formulate departmental personnel policies.

On some items the questionnaire responses do not definitively identify the behaviors which educators should develop in their students:

Example:	Educator RRA	Entry RRA	Experienced RRA
Calculate costs of word processing services and equipment.	7.1%	5.1%	7.3%

	Educator RRA	Entry RRA	Experienced RRA
Justify proposal for cost effective word processing services and equipment.	40.5%	14.0%	24.0%
Design a proposal for cost effective word processing services and equipment.	47.6	7.4	25.3
None of the above apply to your role.	4.8	73.5	43.3

In response to this inconclusive data, most educators would assign their students the task to design and justify a proposal for cost effective word processing services and equipment.

The majority of responding educators indicated they educated their students to perform one of the responsibilities delineated in every questionnaire item. Less than five percent of the educators indicated they did not educate their students to perform any of the responsibilities specified in an item. Their negative responses related to the following fifteen items:

Responsibilities	Percent of MRA Educators Responding Negatively
Illustrate, measure, *establish work flow in your area of responsibility within the data collection and processing system.	4.8
*Establish, assess, identify long- and short-range department goals to staff.	2.4
Select directed practice activities, evaluate performance, or supervise directed practice activities for medical record students.	2.4
*Communicate, recommend, demonstrate new developments in health records and health data systems to members of the medical record committee and appropriate staff members.	2.4
Analyze, report, *respond to requests for health information.	2.4
Discuss, examine, *comply with affirmative action regulations in hiring and promoting employees.	2.4

Responsibilities	Percent of MRA Educators Responding Negatively
*Enforce, inspect, instruct in health and safety regulations throughout the department.	2.4
Calculate costs, justify proposal, or design a proposal for word processing services and equipment.	4.8
Design, identify, *evaluate forms to meet new institutional needs.	2.4
Categorize, design, *evaluate information collected in research projects and special studies.	5.0
Discuss, examine, *report number of physicians' incomplete records to designated medical and administrative staff.	2.4
Inventory, *evaluate, design adequate statistical reporting system for institutional needs.	4.8
Abstract, select, *supervise the collection of health care data for patient care evaluation.	2.4
Organize, abstract, retrieve data from health records for research projects, special studies, and educational programs.	4.8
Audit, instruct, *supervise health data collection and processing activities (e.g., coding, indexing, statistics, etc.)	2.4

*Verified entry-level RRA responsibility

Although the negative response rates are very low, these data are still significant since the thirteen asterisked responsibilities represent verified entry-level roles which medical record administration students should be educated to perform. It is of special concern that some medical record administration students are not being instructed in affirmative action regulations and health and safety regulations.

Medical record technician educators displayed less consistency than medical record administration educators: they chose the same verb over 50% of the time on 64 of the 104 items included in the questionnaire (61%), while medical record administrators chose the same verb over 50% of the time on 92/133 items or (69%). Over 50 percent of the responding medical record technician educators indicated they did not educate medical record technician students to perform any of the responsibilities specified in 29 of 104 items.

Responsibilities	Percent of MRT Educators Responding Negatively
Appraise, revise, or *examine existing work flow in your area of responsibility within the data collection and processing system.	12.7
Conduct administrative committee meetings, follow-up on administrative committee actions, or prepare pertinent information for administrative committees.	9.1
Analyze variations from the departmental budget, devise plan to correct departmental budget variations, or discover departmental budget variations.	47.3
Outline content, evaluate, or conduct in-service training programs in medical records and medical record procedures for staff in other departments (including orientation of medical staff).	40.0
Select, evaluate performance, or supervise directed practice activities for medical record students.	20.0
Evaluate, diagram, or revise (update) the organizational chart for the medical record department.	5.5
Analyze, modify, or justify existing long-and short-range departmental goals.	36.4
Outline progress toward achieving, modify, or *report progress toward achieving long-and short-range departmental goals.	18.2
*Prepare, describe to staff, or examine periodic reports on work production.	14.5
Analyze, report, or apply the results of work simplification studies.	18.2
Review the performance, evaluate the performance, or organize the duties of subordinates using established criteria.	18.2
*Describe to staff, follow, or test existing procedures for the preparation and use of health information in legal proceedings.	5.5

Responsibilities	Percent of MRT Educators Responding Negatively
Appraise, examine, or *revise (update) job descriptions as needed.	5.5
Instruct, interpret, or outline to employees their responsibilities.	18.2
Interview, plan, or question personnel for medical record department in cooperation with department head and/or personnel department.	23.6
Evaluate, review, or revise responsibilities for immediate subordinates.	16.4
Input data, edit output of computerized health information system, or supervise data collection and retrieval from computerized health information system.	13.0
Review, revise, or evaluate the content of existing forms for primary records.	5.5
Review, revise, or evaluate the content of existing forms for secondary records.	5.5
Design, identify the content, or evaluate the effectiveness of forms to meet new institutional needs.	10.9
Develop, evaluate, or identify an automated system for collecting and processing health information for primary and secondary records.	25.5
Develop, evaluate, or identify a manual system for collecting and processing health information for primary and secondary records.	9.3
Estimate, compare, or organize the space and equipment for filing and maintaining active and inactive primary records.	11.1
Organize, supervise, or monitor health record destruction activities.	7.4
Supervise the preparation of tables, slides, graphs, etc. for the presentation of statistical data; illustrate statistical data by tables, slides, graphs, etc.; or prepare tables, slides, graphs, etc. for the presentation of statistical data.	7.5

Responsibilities	Percent of MRT Educators Responding Negatively
Coordinate risk management functions, examine identified risks, or screen health records for legal liability.	27.8
Identify, analyze, or interpret information for use in the institution's Quality Assurance Program.	5.6
Interpret requirements for, inventory, or design institution's plan for Quality Assurance activities.	33.3
Audit health data collection and processing activities, instruct new employees on health data collection and processing activities, or *supervise health data collection and processing activities.	14.8

*Verified entry-level ART responsibility.

The negative responses of medical record technician educators are appropriate for most of these items, as these responsibilities do not represent verified entry-level medical record technician responsibilities. However, the six asterisked items represent verified responsibilities [illegible] entry-level medical record technicians and students need to be educated to perform these responsibilities.

One must especially question why 18.5% of the educators do not expect their students to prepare, describe to staff, or examine periodic reports on work production when the educational Essentials for Medical Record Technician programs specify that the curriculum must include instruction in personnel supervision and human relations.

ACTION VERB LEVEL ANALYSIS

Analysis of the verified entry-level ART role statements (see Appendix 2-1) reveals that the verb *follow* appears twenty times, *apply* nine times, and *maintain* six times in 62 verified statements. Only ten verified statements identify behaviors at the synthesis level and one at the evaluation level. These results indicate that to provide relevant medical record technician education educators need to focus their efforts on preparing students to work in the Application area, use of knowledge in new situations, of the Action Verb levels.

Verified entry-level RRA role statements include primarily level five - synthesis - and level six - evaluation - verbs, such as *supervise* which appears twelve times and *develop* and *evaluate*, each of which appears nine times. To make education relevant, medical record administration educators must offer learning experiences so that students are taught to put parts together to form a new whole, and to judge the value of material for a given purpose by using criteria or standards.

The verified role statements provide an excellent base for designing learning experiences for medical record students. For example, ART students can be given a diagram of work flow within a department and asked to identify gaps and overlaps. RRA students may be assigned to organize, develop, and conduct inservice training programs which will require them to conduct a needs analysis and then design and present appropriate inservice education to meet the employee needs they have identified.

CONCLUSION

The examples cited in this report represent only a small sample of the information available from the data updating the verified roles and responsibilities of ARTs and RRAs. Individual medical record educators may wish to further analyze the responses in order to obtain information on specific curriculum concerns. The existence of data on actual medical record practice in a variety of settings enables educators to assure the health care industry that medical record education is relevant to the world of work.

SUMMARY

Chapter 2 has provided an overview of research studies conducted by AMRA from 1957 to the present, to identify roles, functions, and specific responsibilities of medical record practitioners. The current verified responsibilities for entry-level ARTs and RRAs are listed, as well as additional responsibilities verified for experienced practitioners. Also included is a discussion of the use of the updated data by medical record educators in planning educational programs and in designing learning experiences. An annotated bibliography and the frequencies of the Role Delineation verbs used in the 1981 update study are appended.

ANNOTATED BIBLIOGRAPHY - CHAPTER 2

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> This book forms the framework for a course on systematic curriculum design, appropriate for developing courses relevant to the future professional needs of students.

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A summary of the provisions of Public Law 94-484.

Sway, Elizabeth M. "Appropriate Roles and Functions of MR Employees in Long-Term Care." Medical Record News (February 1976): 20-27.

The application of principles for delineation of roles and functions to the medical record employee in long-term care is demonstrated in this article.

U.S. Bureau of Health Manpower, "A Report on Allied Health Personnel." DHHS Publication No. (HRA) 80-28, December 1979.

Information is provided on the allied health professions. Each discipline is defined in terms of an occupational description, composition of the work force, education, and credentialing.

U.S. Health Resources Administration, "Initial Role Delineation for Health Education." DHHS Publication No. (HRA) 80-44, April 1980.

This report summarizes the results of the Role Delineation Project that provided a generic description of the entry-level health educator. The skills and knowledge required for each function are listed.

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Appendix 2-1
Frequency of Role Delineation Verbs In Accepted Role Statements — ART & RRA

Entry-Level ART

Verb Level	Verb	Frequency
2 Comprehension	Locate	1
	Report	2
3 Application	Apply	9
	Code	1
	Follow	20
	Perform	1
	Maintain	6
	Respond	1
	Retrieve	4
	Transcribe	1
4 Analysis	Abstract	2
	Examine	1
	Review	1
	Select	1
5 Synthesis	Explain	1
	Gather	1
	Organize	1
	Prepare	4
	Revise	1
	Supervise	1
	Write	1
6 Evaluation	Monitor	1

Entry-Level RRA

2 Comprehension	Identify	1
	Report	1
3 Application	Apply	2
	Comply	1
	Enforce	1
	Follow	1
	Maintain	1
	Perform	1
	Respond	1
	Retrieve	2
4 Analysis	Analyze	2
	Determine	1
	Examine	2
	Point Out	2
	Review	3
	Solve	1
5 Synthesis	Advice	1
	Communicate	1
	Conduct	2
	Contribute	1
	Counsel	2
	Develop	9
	Establish	4
	Formulate	1
	Gather	2
	Incorporate	3
	Organize	3
	Prepare	4
	Rearrange	1
	Recommend	4
	Revise	9
	Supervise	12
	Update	1
	Write	1
	Plan	2
6 Evaluation	Assess	2
	Evaluate	10
	Monitor	2

Appendix 2-2

Frequency of Role Delineation Verbs In Accepted Role Statements — ART & RRA

	Experienced ART	
Verb Level	Verb	Frequency
2 Comprehension	Identify	1
	Report	1
3 Application	Apply	8
	Code	1
	Conduct	1
	Follow	20
	Interview	1
	Maintain	6
	Modify	1
	Perform	1
	Prepare	7
	Respond	1
	Retrieve	3
	Screen	1
4 Analysis	Abstract	2
	Analyze	3
	Examine	1
	Review	3
5 Synthesis	Coordinate	2
	Design	1
	Develop	1
	Gather	1
	Instruct	1
	Organize	1
	Revise	2
	Supervise	5
	Write	1
6 Evaluation	Evaluate	3
	Justify	1
	Monitor	1

	Experienced RRA	
2 Comprehension	Discuss	1
	Identify	1
	Review	2
3 Application	Comply	1
	Follow	1
	Maintain	1
	Prepare	1
	Screen	1
4 Analysis	Analyze	3
	Solve	1
5 Synthesis	Advise	1
	Communicate	1
	Conduct	2
	Contribute	2
	Coordinate	2
	Counsel	1
	Design	6
	Develop	13
	Establish	6
	Formulate	3
	Gather	2
	Incorporate	3
	Organize	4
	Plan	3
	Prepare	3
	Provide	1
	Rearrange	1
	Recommend	1
	Revise	9
	Supervise	7
	Update	1
	Write	1
6 Evaluation	Appraise	1
	Assess	2
	Enforce	1
	Evaluate	20
	Interpret	1
	Justify	2
	Monitor	2
	Rate	1

Chapter 3

Affective Domain and Identified Affective Characteristics

INTRODUCTION

This chapter of the Educational Resource Document presents one of the three domains of learning, the Affective Domain. An overview of the Affective Domain with definitions of key terms and the theoretical framework of affect education provides background information. Suggestions for application with examples of competencies, objectives, and resources for learning activities are provided for medical record educators. Inclusion of the affective domain (beyond the Code of Ethics) within medical record educational programs is a relatively recent development. For that reason, an entire chapter within the Educational Resource Document is being presented.

There are appropriate affective characteristics for medical record professionals and there is a place for an affect component within educational programs. Within the context of this chapter, domain refers to a sphere or field of learning. The affective domain addresses the emotional reaction to learning expressed by such terms as personality, attitudes, interests, values, appreciations, and beliefs. The primary goal in this domain is to assist the learner in the development of values, beliefs, characteristics, attitudes, and interests that will support a role or identity that is compatible with the responsibilities of medical record professionals. Discussion also includes a process for identification of critical affective behaviors and characteristics, identified behaviors, and suggestions for adaption in medical record curricula.

It must be emphasized that inclusion of the affective domain in medical record curricula is just as crucial as inclusion of the cognitive and psychomotor domains. The affective domain directly relates to the personal development of medical record professionals and the quality of service s/he will provide. The affective characteristics of an individual develop through life experiences. Although each student enters a medical record curriculum with a set of attitudes, interests, beliefs, and appreciations, educators must provide appropriate experiences for students so that they have opportunities to develop the critical affective characteristics needed by medical record professionals. Resources for affective learning experiences are contained in this chapter to assist educators to approach this task in a systematic manner.

This chapter has been written with the following objectives in mind:

1. Provide medical record educators with an overview of the affective domain;

2. Identify critical affective characteristics for medical record professionals;

3. Provide examples of competencies and enabling objectives for some of the critical affective characteristics;

4. Suggest an implementation plan for the development of critical affective characteristics in the curriculum;

5. List references and resources for the affective domain;

6. Provide a glossary of terms for the affective domain.

Educators may use this chapter to gain an understanding of the affective domain and to develop a systematic plan for development of a curriculum which addresses critical affective characteristics in educational programs for medical record administrators and medical record technicians. This chapter may also be used as a reference for locating learning experiences designed to enhance the identified critical affective behaviors.

THEORETICAL CONCEPTS

Presented in this section is a background for values clarification and the specification of affective objectives. Since there has been minimal research investigations into affective education for medical record professionals, development of objectives for the affective domain is presented as a separate entity. Detailed information relating to the competency and objective development for the cognitive and psychomotor domains may be found in Chapter 4.

Review of available literature indicates that the study of the affective domain has evolved through two principal sources: values clarification (Raths, Harmin, and Simon, 1966); and the taxonomic code for affective learning (Krathwohl, Bloom, and Masia, 1964). Both groups view the affective domain as developing through an evolutionary process. Since affect results from a gradual evolution, educators need to begin to think of the process of developing certain critical affective characteristics in students and creating opportunities for students to begin to internalize those characteristics.

Raths, et al (1966), views values as developing from three processes:

Choosing: 1) freely;
2) from alternatives;
3) after thoughtful consideration of the consequences of each alternative;

Prizing: 4) cherishing, being happy with the choice;
5) willing to affirm the choice publicly;

Acting: 6) doing something with the choice;
7) repeatedly, in some pattern of life.

Collectively, these processes result in a set of values. In Raths' scheme, a value must meet the seven criteria listed above before it qualifies as a value. If a belief, attitude, behavior, or interest does not meet all of the criteria, Raths calls it a value indicator. Value indicators include:

1. Goals or purposes
2. Aspirations
3. Attitudes
4. Interests
5. Feelings
6. Beliefs and convictions
7. Activities
8. Worries, problems, obstacles

Most often, these eight categories are revealed in the classroom through observation of student behavior. The instructor's role, then, to help those students who choose to do so, is to elevate these indicators to the level of values.

There are two approaches that can be used to assist students in affect development - traditional and practical.

Traditional approaches to assist students in value development include:

1. Setting an example
2. Persuading and convincing
3. Limiting choices
4. Inspiring
5. Rules and regulations
6. Cultural and religious dogma
7. Appealing to conscience (Raths, Harmin, Simon, 1966)

Raths, et al (1966) suggest an alternative to the traditional approach - the practical approach and identifies it as the clarifying response. The basic strategy of this approach rests on a specific method of responding to things a student says and does. The result is that students consider what they have chosen, what they prize, and what they are doing. This strategy encourages students to assume the responsibility of clarifying their values. Implicit in this approach is that the process is directed by the student with the instructor serving as a facilitator. An overview of twelve affect studies found in Values and Teaching (Raths, et al, 1966), indicates that the values clarification process does make a difference in student behaviors.

The other principal source for the affective domain is the work of Krathwohl, Bloom, and Masia (1964). Krathwohl identified five levels of affective objectives:

1. Receiving - an awareness;
2. Responding - reaction to a situation with some satisfaction;
3. Valuing - the stage of choosing and expressing a commitment to act;
4. Organizing - the stage of establishing the internalized value into a system evidencing priorities;
5. Characterizing - the degree of internalization wherein the individual is consistent in behavior, formulating his/her philosophy of life through integration of all affective components.

Like Raths, Krathwohl's taxonomy describes a gradual process of value development. It is designed to identify growth in the attainment of affective objectives.

Both sources (Raths and Krathwohl) emphasize the developmental continuum for values. Values, by definition, are one component of the affective domain. The theoretical concepts discussed in this section can be broadened from values application to the affective domain. For example, the values clarification process, the clarifying response, can be used to clarify the critical affective characteristics necessary for medical record administrators and medical record technicians.

Seldon (1968), in his use of the term "profession", defines it as possessing the following features:

1. Skill based on theoretical knowledge;
2. Skill requiring education and training;
3. Individual demonstration of competence through the passing of tests;
4. Emphasis on service for the public welfare;
5. An organization comprising its qualified members;
6. Integrating of conduct maintained by adherence to a code of ethics.

This chapter suggests an additional feature to Seldon's definition: Affective characteristics linked with roles and responsibilities of medical record professionals.

IMPORTANCE FOR MEDICAL RECORD EDUCATORS

The need for affective education is recognized by educators because affective characteristics contribute to the personal development of a medical record professional and to the quality of service s/he will provide to the public. Because of the role affect will play in the career of a medical record professional, educators need to provide students with learning experiences which will enhance the development of the critical affective characteristics. The plan to begin teaching the affective domain starts with the identification of critical affective characteristics.

IDENTIFICATION OF CRITICAL AFFECTIVE CHARACTERISTICS

Creation of a self-report questionnaire included the development of a list of affective characteristics (See Appendix 3-1) and action statements. For each characteristic, three action statements were generated for a total of 45 statements. Action statements were developed based on the practical experiences of the Task Group members and The Ohio State University Attribute Classification Scheme (Pariser, et al., 1978). The following sources were reviewed to identify affective characteristics:

1. American Medical Record Association Code of Ethics;
2. American Medical Record Association Position Statement on Confidentiality of Patient Health Information;
3. American Hospital Association Statement on Patient Rights;
4. Job Evaluation Forms from employers of medical record professionals;
5. Personality Tests/Inventories;
6. The Ohio State University Attribute Classification Scheme (Pariser, et al., 1978);
7. Major and Specific Responsibilities for RRAs and ARTs (Johnson and Cave, 1979);
8. Codes of Ethics from other professional groups:
   Institute of Electrical and Electronic Engineers
   American Chemical Society
   American College of Social Work
   American Bar Association.

Fifteen (15) affective characteristics were included in the final selection and are found in Appendix 3-1.

The questionnaire was sent to 1491 Registered Record Administrators and Accredited Record Technicians.

Respondents were requested to:

1. Assign a relative importance letter to each of the 45 statements relating to affect using a letter no more than fifteen times:

   A = Absolutely necessary
   B = Desirable but not essential
   C = Helpful but of limited importance

2. Assign one of 15 affective characteristics to each statement using a characteristic no more than three times.

It is significant to remember that the affective characteristics were not directly rank-ordered. Only the action statements were rank-ordered into A, B, or C groupings. Indirectly, where a clear consensus of opinion appeared, an affective characteristic was matched with a given action statement.

Affective behaviors considered absolutely essential by the majority of Registered Record Administrators and Accredited Record Technicians are shown in Table 1 with their matched affective quality. Eleven statements were identified as representing the same characteristic by both groups. The ARTs selected fifteen action statements as absolutely necessary representing primarily the characteristics of being consistent and ethical. The RRAs selected eleven statements as absolutely necessary representing primarily the characteristics of being consistent, dependable, and decisive. (Table 1) There were four statements the RRAs did not indicate as being absolutely necessary as the ARTs indicated. Role differences may account for this difference.

Presented in Table 2 are the three ART choices which had at least 50% agreement regarding desirable but not essential behaviors. There was no other agreement in the choices of both groups overall (ART and RRA) regarding these behaviors. However, as seen in Table 3, there was much agreement in the decisions concerning statements that are of limited importance. The characteristic "Enthusiastic/Motivated" appeared three times on the list of unimportant characteristics. The other qualities regarded by RRAs and ARTs as helpful but of limited importance were: confident, sharing, cooperative, consistent, perceptive, creative.

The remaining statements were rated anywhere from absolutely necessary to helpful but of limited importance, depending upon the value judgment of individual respondents (Table 4). This is not surprising since the importance attached to different affective behaviors and characteristics is a highly personal matter. It suggests that each faculty will need a set of affective characteristics before affective objectives can be determined for a given educational setting. While the list of affective characteristics may be flexible, agreement may be expected with regard to accepting consistency, ethical conduct, and dependability as desirable outcomes. The action statements included in the questionnaire were not considered to be inclusive of the entire realm of action statements. It may be desirable to develop additional statements.

Once the critical characteristics are identified, the process of implementing teaching in the affective domain can begin.

IMPLEMENTATION OF TEACHING IN THE AFFECTIVE DOMAIN

Suggestions for implementing teaching in the affective domain include following a systematic process similar to the discussion in the chapter on curriculum design. Examples of how this may be accomplished are provided in this section. Although treated separately in the Educational Resource Document, it is important to remember that the affective domain should be integrated wherever possible with the cognitive and psychomotor domains. One example of a systematic process for implementation of the affective domain is to:

1. Develop competencies and enabling objectives for identified affective characteristics;
2. Select and provide learning experiences which will facilitate growth and development;
3. Select and develop evaluation and assessment tools;

Table 1
Statements Rated "Absolutely Necessary" by the Majority of RRAs and ARTs with Matched Affective Characteristics

Statements	Ratings		Matched Qualities	
	RRA% (N=402)	ART% (N=406)	RRA	ART
When approached with a problem that could affect other departments, seeks their opinions.	67.6	59.4	Cooperative	Same
Is willing to say, "I don't know."	59.8	53.7	Open	Same
Seeks the assistance of others when performing unfamiliar tasks.	—	53.7	—	Initiative
Meets assigned deadlines even when she/he must work overtime.	57.1	53.9	Dependable	Same
Plays no favorites regarding enforcement of delinquent record policies.	61.7	77.3	Consistent	Same
Remains firm in refusing to relate confidential information to a physician, even when requested to do so by the hospital administrator.	—	61.3	—	Ethical
Knows how to establish priorities.	78.2	63.5	Decisive	Perceptive
Uniformly follows procedures for release of health information.	76.2	86.5	Consistent	Same
Encourages patients to read consent forms before signing.	—	52.5	—	Ethical
Points out mistakes of employees in privacy.	64.2	60.3	Considerate	Same
Addresses problems as they occur instead of just complaining about them.	58.8	51.7	Decisive	Same
Calls to the physician's attention their inadequate or incorrect documentation.	—	51.5	—	Confident
Feels that a Medical Record Department is an important part of the hospital structure.	60.0	62.3	Confident	Same
Makes every effort to be certain that policies are uniformly applied.	56.9	60.1	Consistent	Same
Supports hospital policies regardless of personal opinions.	55.4	61.6	Dependable	Ethical

Table 2
Statements Rated "Desirable But Not Essential" by the Majority of ARTs with Matched Qualities

Statements	Ratings ART% (N=406)	Matched Quality
Is willing to make an exception to the delinquent record procedure under extenuating circumstances.	51.7	Flexible
Is receptive to an employee's opinions.	51.7	Open
Helps a co-worker or subordinate complete a task when necessary.	50.5	Cooperative

Table 3
Statements Rated "Helpful But Of Limited Importance" by the Majority of RRAs and ARTs with Matched Qualities

Statements	Ratings		Matched Qualities	
	RRA% (N=402)	ART% (N=406)	RRA	ART
Persuades others to go to seminars.	61.5	55.4	Enthusiastic/ Motivated	Same
Is unafraid to express personal opinions which may hinder career advancement.	58.1	70.9	Confident	Same
Makes an effort to attend educational workshops even if all continuing education hours have been satisfied.	64.4	62.8	Enthusiastic/ Motivated	Same
Shares interesting articles with appropriate co-workers.	72.9	82.5	Sharing	Same
Prefers being given specific directions by supervisor when performing duties.	76.0	67.5	Cooperative	Consistent
Is willing to accept responsibilities in professional organizations.	61.0	62.8	Enthusiastic/ Motivated	Same
Realizes that career advancement will occur faster if she/he agrees with the supervisor.	86.7	86.0	Perceptive	Same
Is willing to try new methods even when everything is operating smoothly.	55.4	59.1	Creative	Same

Table 4

Statements rated "Absolutely Necessary" (A) or "Helpful but of Limited Importance" (C) by Registered Record Administrators and Accredited Record Technicians with Matched Qualities

	RRA Ratings		ART Ratings		Matched Characteristic	
Statement	**A%**	**C%**	**A%**	**C%**	**RRA**	**ART**
Supervises fully trained employees even if it requires additional time and effort.	26.9	36.1	23.4	34.2	Dedicated	Same
Readily admits to making mistakes.	42.6	20.3	39.7	22.9	Open	Same
Praises the efforts of others.	46.2	10.9	26.6	24.1	Considerate	Same
Is willing to spend time with students in the clinical setting even though extra effort is required.	11.1	44.6	8.1	45.8	Sharing	Same
Designs new ways of handling health information.	19.4	30.5	7.1	46.3	Creative	Same
Has a strong commitment to his/her profession in spite of limitations and pressures.	39.7	19.6	45.8	14.0	Dedicated	Same
Seeks other jobs to do when current work is completed.	25.2	28.3	26.8	22.2	Initiative	Same
Routinely updates departmental procedures even though it is time consuming.	22.3	31.6	24.4	38.4	Initiative	Dependable
Knows his/her limitations regarding personal and professional knowledge.	45.0	18.4	42.9	26.4	Perceptive	Same
Changes wording of a performance appraisal when an employee presents a valid reason.	23.5	27.1	16.7	33.5	Flexible	Same
Selects new employees from several equally qualified applicants.	28.1	24.2	25.9	30.0	Decisive	Same
Starts working as soon as he/she arrives at work.	15.0	38.0	35.7	25.1	Dependable	Same
Is willing to try new ideas before passing judgment.	27.4	24.9	18.7	32.8	Flexible	Same
Provides candid performance evaluations for departmental employees.	44.1	22.3	34.2	32.5	Creative	Same
Would not step on others for the sake of career advancement.	34.1	35.8	35.0	[illegible]2.0	Considerate	Ethical
Keeps departmental employees informed regarding hospital activities.	23.7	41.2	19.5	46.3	Sharing	Same
Establishes long-term professional goals.	21.3	48.7	15.5	49.0	Creative	Same
Does not hesitate to resolve employee disputes.	39.2	25.9	34.2	33.0	Decisive	Same

4. Evaluate/Assess the process to determine if change has occurred.

The major purpose of Task Force C was to identify critical affective characteristics selected by RRAs and ARTs. It is recommended that educators preparing medical record professionals follow the choices of these groups. Other affective characteristics which may be considered important to the individual teacher may also be identified and placed in the curriculum. The balance of affective characteristics not chosen by those surveyed are: Enthusiastic/Motivated, Flexible, Sharing, Creative, Dedicated.

In addition, development of listings of other qualities is an option for local sites.

Characteristics and action statements generated in this study and any additional characteristics or action statements derived in a local setting can be fit into a classification scheme as shown in Figure 1. This scheme is based on the design of The Ohio State University Attribute Classification Scheme (Pariser, et al., 1978). Figure 1 may then be used in the implementation plan.

STEP ONE: DEVELOPING COMPETENCIES AND ENABLING OBJECTIVES

The specification of competencies and enabling objectives can be broken down into the following steps:

1.1 Select (from Figure 1 or identify) a critical affective characteristic. Examples:

Dependability Open Consistent

1.2 List behavioral indicators (action statements) for the affective characteristic in the classroom. Examples:

Characteristics	Behavioral Indicators
Dependability	Meets assigned deadlines. Supports policies regardless of personal opinions.
Open	Is willing to say "I don't know". Readily admits to mistakes.
Consistent	Plays no favorites. Uniformly follows procedures.

1.3 Develop a competency statement which expresses achievement of the characteristic. Examples:

Figure 1

Sample Classification Scheme for the Affective Domain for Registered Record Administrators

Affective Characteristics	Action Statements	Self	Others	Delivery Systems Facilities	Profession
Cooperative	When approached with a problem that could affect other departments, seeks their opinion.			X	
Open	Is willing to say, "I don't know."	X	X		
Dependable	Meets assigned deadlines even when performing unfamiliar tasks.	X	X	X	X
Consistent	Plays no favorties regarding enforcement of delinquent record policies.			X	
Decisive	Knows how to establish priorities.	X			
Consistent	Uniformly follows procedures for release of health information.			X	X
Considerate	Points out mistakes of employees in privacy.		X		
Decisive	Addresses problems as they occur instead of just complaining about them.	X			
Confident	Feels that a Medical Record Department is an important part of the hospital structure.	X			
Consistent	Makes every effort to be certain that policies are uniformly applied.	X		X	
Dependable	Supports hospital policies regardless of personal opinions.				X

Characteristics	Competency
Dependability	Upon completion of this course, the medical record student will demonstrate dependability through class participation and compliance with course requirements.
Open	Upon completion of this course, the medical record student will demonstrate openness through interaction with peers and faculty.
Consistent	Upon completion of this course, the medical record student will demonstrate consistency in professional conduct reflective of the code of ethics and standards of practice.

1.4 Convert behavioral indicators to enabling objectives by characterizing the student behavior which demonstrates the affective characteristic. Examples:

Behavioral Indicators	Enabling Objectives
	The student will...
1. Meets assigned deadlines.	1. Submit all assignments on time.
2. Supports policies regardless of personal opinions.	2. Defend the policy "no patient access" during a role-play exercise.
3. Is willing to say, "I don't know".	3. Be forthright and acknowledge that they do not have an answer to a question or know how to respond in a given situation.
4. Readily admits to mistakes.	4. Freely admits to others that s/he is in error.
5. Plays no favorites.	5. In a given situation, uniformly enforces delinquent record policies.
6. Uniformly follows procedures.	6. During a role-play exercise, uniformly follows release of information policies and procedures.

Once the enabling objectives and competencies have been determined and placed within the curriculum, learning experiences may be selected which will facilitate growth and development.

STEP TWO: SELECTING AND PROVIDING LEARNING EXPERIENCES

Achievement of the affective enabling objectives and competencies can be implemented in two ways:

1. A separate professional growth and development course may be initiated to address the affective enabling objectives and competencies identified from Step One.

2. Affective enabling objectives and competencies may be integrated and included within each course in the curriculum. (See Appendix 3-2)

While either method may be used, it is suggested that faculty consider using both methods.

An experiential training course identified as Professional Growth and Development might be designed to include the following elements:

1. Class time - one two-hour class for one quarter, twenty hours total.

2. Identified affective objectives and competencies introduced with learning experiences geared to enhance achievement of the objectives and competencies. Activities might include role-play exercises, simulations. See the chapter on Teaching Strategies for details on how these might be applied and additional activities.

3. Student opportunities to experiment with new attitudes and the behavioral indicators in a supportive climate.

4. Feedback from peers.

A course of this nature, at the beginning of medical record programs, sets the stage and climate for the integration of the affective domain into the content-specific courses of the medical record curricula. Integration of the affective domain might include:

1. Clinical Experiences
   Students and Clinical faculty use evaluation instruments with brief joint processing sessions in the clinical setting. (See Appendix 3-3)

2. Class Reinforcement
   Development of objectives to reinforce desired student behaviors which occur in a regular class period relative to specific course content at least weekly. In addition, general behaviors such as "submits all assignments on time, participates in class discussion," can be used for all courses. Specific objectives relating to content of a medicolegal course might be:

2.1 In a given situation, the medical record student will uniformly apply release of information policies and procedures.

2.2 During role play exercises, the medical record student will enforce the "no patient access" policy even though s/he personally disagrees with this practice.

Adoption of either or both methods of integrating the affective domain can provide numerous opportunities for student growth and development.

Learning experiences for either setting (individual course or as part of a content-specific course), can be categorized as follows:

1. Structured experiences which include activities like role playing, simulations, and dyad or triad listening;
2. Results from instrumentation including learner assessment scales, questionnaires, and surveys;
3. Lecturettes/inputs including short verbal and/or audio presentations.

(Pariser et al., 1978)

Resources provided in the annotated bibliography will guide faculty to activities from the three categories listed above. Learning experiences for students can be developed in any of these categories in the following ways:

1. Direct use without adaption of activities as described in the sources listed in the annotated bibliography. Example:

   In Activities and Exercises for Affective Education (Thayer, 1975), Kent Beeler uses an inventory which can be used to create an awareness in students of their reactions to people who are different or have problems related to a label/stereotype given them. This activity, when used in a management class, provokes discussions on the importance of being objective and learning how to accept people who are different. (See Appendix 3-4)

2. Revise/adapt activities for medical record students found in sources listed in the annotated bibliography. Example:

   Kirschenbaum's Advanced Values Clarification has numerous situational exercises which can be revised to reflect situations encountered in medical record practice.

3. Create an experience which meets the needs of the student. Example:

   The emblem of the school or college can be used as a get-acquainted exercise. The activity requires 30-40 minutes.

Directions are:

1. Have students complete emblem with
   - Hobbies or Pastimes
   - Personal Motto
   - Where they come from, family information.

2. Students then mix in silence for 5 minutes looking at each others' emblems.

3. Everyone chooses a partner and introduces the other to the group. (See Appendix 3-5)

The instructor can use the information on the emblems to develop additional attributes and gain insights into the values of the students.

Once the learning experiences have been selected, evaluation and assessment tools need to be considered.

STEP THREE: SELECTING AND DEVELOPING EVALUATION AND ASSESSMENT TOOLS

Use and design of evaluation and assessment tools for the affective domain should be both formative and summative in nature. Formative evaluation and assessment occurs during the instructional process to provide feedback to both teachers and students. This type of evaluation is not for grading purposes but is used to identify those students who need additional help, time, or resources to achieve mastery. (Bloom et al., 1981) Summative evaluation is the collection of evidence at the end of a course or unit of instruction to certify mastery of objectives and/or to assign grades (Bloom et al., 1981).

Please refer to the Evaluation chapter for further discussion of evaluation.

The parts of an evaluation system for the affective domain are:

1. Rating scales for notation of impressions from admissions interviews. Faculty who perform admissions interviews would be requested to look for examples of student behaviors which are indicative of the critical affective characteristics. After an experimental period, faculty would be gathered together to rank the behaviors. From these results another round of admissions interviews and re-evaluations would occur until a scale is developed which becomes a rating scale used by medical record faculty to select students.

2. Standardized tests - paper and pencil attitude surveys. The Myers-Briggs Type Indicator (MBTI) would be helpful in discovering how students need to develop in the affective domain and how groups of students differ with regard to experiences which

might be planned for affective development.

3. Self-administered attitude instruments (to increase self-awareness). The Firo-B and other short instruments currently available at little or no cost are commonly used as part of the process in experiential training laboratories. Students may be paired to discuss each other's results as a part of a process of raising self-awareness and the impact of one's self on others.

4. Simulations. Simulations make judgment style observable and can be designed to determine values without requiring the kind of advance content information students acquire later in the medical record curriculum. The process that a student used in working through a simulation could be quantified by noting time required for completion, resources "used", and the effectiveness of results. Discussion of resources used by the student would be productive in the context of experiential training needed and to shape future experiences for the student.

All of the above evaluation and assessment tools suggestions can be used in both formative and summative techniques.

Formative Evaluation

Rating scales and standardized tests might be used as part of the admissions process for medical record programs and serve as a tool for student advisory/counseling sessions. Self-administered attitude instruments and simulations might be a part of the professional growth and development course or used in conjunction with a content-specific course within the medical record curriculum.

Summative Evaluation

Direct observation of affective objectives of students during a course can help identify attainment of competencies. Records of class participation and other criteria identified by the faculty will provide one form of summative evaluation. Simulations are also an appropriate mechanism for summative evaluation in the affective domain. Paper and pencil simulations as well as videotaping of a role play simulation and comparison against established criteria might be utilized. Also an evaluation instrument like that shown in Appendix 3-6 could be developed as an evaluation mechanism. Variety, in learning experiences, enhances opportunities for students to grow and develop as medical record professionals.

STEP FOUR: EVALUATING/ASSESSING THE IMPLEMENTATION PLAN AND STUDENT GROWTH AND DEVELOPMENT

Evaluation and assessment occur in two different ways:

1. Evaluation of the implementation plan.
2. Assessment of student growth and development.

Evaluation of integration efforts need to include input from faculty and students. Formal evaluation questionnaires can provide new directions for admission criteria, student advisement, and curriculum development. Worthwhile input can also be obtained from clinical faculty and employers of medical record professionals.

Assessment of student growth and development must occur on a continuing basis. At the time of admission, an assessment needs to be made to determine the student's developmental stage. Remember that each student will be in different stages of development. Through the student advisement process, growth and development and reactions to various learning experiences can be discussed. Where appropriate, group discussion can be included. Anecdotal records, indicating student progress, might be maintained to form the basis of an exit interview at the end of the quarter and at graduation. Identification of student strengths and weaknesses can help the student focus on areas of further growth and development as they become a part of the medical record profession.

Former students, employers, and clinical faculty are appropriate choices in a graduate follow-up study to determine how and in what way the affective component has been helpful.

SUMMARY OF CHAPTER

An overview has been provided of the affective domain of teaching; the identified affective behaviors and characteristics important in medical record practice; and examples of curriculum integration and implementation processes.

Systematic implementation of this program may alleviate faculty doubts about:

1. The ability of educators to change student attitudes;
2. The measurability of an affective education program;
3. The right to mold or influence a student's affective behaviors.

This chapter will provide educators with information on the importance of affective characteristics/behaviors in professional practice. Remember:

1. Desirable behaviors can be reinforced;
2. Students often welcome the opportunity to clarify their values;
3. A positive educational climate where an active role in learning and evaluation process occurs, encourages student growth.

A methodology is suggested which medical record programs may follow to collect additional data for their programs.

The annotated bibliography includes references for a wide variety of learning activities and other services pertinent to the investigation of the affective domain.

GLOSSARY

The terms listed represent definitions of terms as used within this chapter. The sources for these definitions are from journals, books, the educational consultant, and the authors.

1. Affective characteristics represent a person's interests, attitudes, values, emotional predispositions, and biases. They include those personality traits which are based primarily on feelings.

2. Affective Domain is the sphere or field of learning that addresses the emotional reaction to learning expressed by such terms as personality, attitudes, interests, values, appreciations, and beliefs.

3. Affective Indicators are those behaviors and/or verbal expressions of individuals which reveal an individual's affect.

4. Appreciation is the act of placing an estimate on persons or things; judgment.

5. Attitude has been defined as a relatively enduring organization of beliefs around an object, subject, or concept which predisposes one to respond in some preferential manner.

6. Beliefs are accepted as true, not necessarily derived first-hand, and not necessarily accepted on an intellectual basis only; mental conviction.

7. Domain is a sphere or field of learning.

8. Interest is a preference for an object, activity, task, or occupation. Expressed interest is the verbal profession of a preference; manifest interest is synonymous with participation in an activity or an occupation.

9. Learning is a change in behavior resulting from experience.

10. Personality has been defined in different ways by different psychologists. We define personality as a pattern of traits or ways of reacting to external stimuli.

11. Profession includes the features of: (a) skill based on theoretical knowledge; (b) skill requiring both education and training; (c) individual demonstration of competence through the passing of tests; (d) emphasis on service for the public welfare; (e) an organization comprising its qualified members; and (f) integrity of conduct maintained by adherence to a code of ethics.

12. Value is differentiated from interest mainly by the degree of intensity. Values represent a profound commitment to goals and tasks and hence are more likely to be expressed in action.

13. Values Clarification is the process of stimulating students to understand their thinking and behavior and thus identify their values.

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ANNOTATED BIBLIOGRAPHY - CHAPTER 3

The bibliography is divided into two sections: Section One is devoted to affective learning resources; Section Two is devoted to general references (pertinent to the "affect" field).

Section One: Affective Learning Resources

Anthony, W., and Carkhuff, R. Art of Health Care. Amherst, MA: Human Resource Development Press, 1976.

> Very practical, involving a basic workbook, oriented toward interactions with clients. Provides exercises and structured experiences, instrumentation and input materials in every area commonly taught in such courses. Oriented toward interactions with co-workers. (Communication Skills)

Casella, C. Training Experiences to Improve Interpersonal Relations in Health Care Organizations. Greenvale, NY, 1977.

> Plans for management training program emphasizing human relations and organizational behavior. All materials for structured experiences, and all instructor's guides are included. (General)

Fraenkel, J. How to Teach About Values: An Analytic Approach. Englewood Cliffs, NJ: Prentice-Hall, 1977.

> Gives a thorough theoretical background on the teaching of values and the individual's development of personal values. Tends to develop the instructor's ability to create learning experiences independently. (Background for the instructor)

Hall, B. Value Clarification as Learning Process: A Sourcebook. New York: Paulist, 1973.

> Excellent source for presenting theory. Experiences given are especially helpful on the emotional aspects of values clarification, and are easily converted to allied health situations. (Values Clarification)

Johnson, D., and Johnson, F. Joining Together. Englewood Cliffs, NJ: Prentice-Hall, 1975.

> Although other topics are covered, the two chapters included on these difficult-to-resource topics are exceptionally well done. Input, experiences, and instrumentation are given. (Conflict and Power Management)

Kirschenbaum, H. *Advanced Values Clarification*. La Jolla, CA: University Associates, 1977.

Gives a clear introduction to the standard theoretical framework in values clarification. Allied health terms and situations may be substituted in any experience suggested. (Values Clarification)

Parnes, S.; Noller, R.; and Bondi, A. *Guide to Creative Action* and *Creative Handbook.* New York: Scribner's, 1976; 1977.

Both books are needed (because they refer to each other) to get the full value gathered here, of the twenty-five years of creative problem solving on the subject of teaching problem solving, by most of the leaders in the field. (Problem Solving)

Pfeiffer, W., and Jones, J. *Handbooks* and *Annuals*. La Jolla, CA: University Associates, 1972-79.

Richest sources, although most not already related to allied health. The Reference Guide in the series organizes the hundreds of structured experiences, lecturettes, and instruments under broad categories and gives a brief sketch of each. (General)

Reilly, D. *Teaching and Evaluating the Affective Domain in Nursing Homes*. Thorofare, NJ: Charles B. Slack, Inc., 1978.

A warm, educationally profound book of guidance for those who want to guide others in deepening their awareness and skill in human communication. Much experience and clear thinking are reflected in the articles by four authors. (Background for the instructor)

Walton, R. *Interpersonal Peacemaking: Confrontation and 3rd Party Consultation*. Reading, MA: Addison Wesley, 1969.

A wise and thoughtful book with excellent theory. Its cases could well be adapted for role plays, as part of structured experiences. (Conflict and Power Management)

Wilson, M. *Equivalency Evaluation in Development of Health Practitioners*. Thorofare, NJ: Charles B. Slack, Inc., 1978.

Although the thrust of the book is toward recognizing comparable preparation no matter where it is gained, the parts on the evaluation of "attributes" provide some of the most lucid writing on the subject. (Background for the instructor)

Section Two: General References

Archer, P.F. Student Behavior and Attitudes: The Affective Domain. Media Systems Series in Creative Teaching, 1979.

Learning module for educators; designed to acquaint educators with the affective domain.

Avila, J. Development of Attitudinal Skills. Washington: Office of Education, Department of Health and Human Services, 1979. (ERIC Document Reproduction Service No. 178706)

Final evaluation report on a curriculum model for vocational teachers to help students gain appropriate affective behaviors.

Gephart, W.J.; Ingle, R.B.; and Marshall, F.J. Evaluation in the Affective Domain. Bloomington, IN: Phi Delta Kappa, 1976.

This book is a summary of three conferences organized by the National Symposium for Professor of Education Research. The presentation focused on the nature of affect, the measurement of individual affect and the measurement of the affect as a component of the learning environment. Conference participants then ranked in priority order the principles and guidelines which should be considered in measuring affect on an individual and/or group basis.

Gilmore, J.V. The Productive Personality. San Francisco: Albion Publishing Co., 1974.

The author's definition of productive personality emphasizes social responsibility and sense of personal identity. In his view productive individuals have specific coping skills and a highly developed inner value system. The development of coping skills and inner value system by parents and teachers is traced in detail.

Henerson, M.E., et al. How to Measure Attitudes. Beverly Hills, CA: Sage Publications, 1978.

Booklet which should help the reader develop basic skills in designing and using instruments for the measurement of affective objectives or attitudes.

McBee, M.L., ed. New Directions for Higher Education. San Francisco: Jossey-Bass, Inc., 1980.

The major theme of this book is a discussion of the responsibilities of college faculty for the development of values. One basic question is raised: Can values be developed in college? Can morality and honesty be taught? Two positions are taken: (1) they can be taught by example; (2) they can and should be taught in classes. Throughout the book the discussion is centered on morality; other values are not considered. Extracurricular influences on students' moral development are also discussed.

Payne, D.A., ed. Recent Developments in Affective Measurement. San Francisco: Jossey-Bass, Inc., 1980.

Explains basic concepts and discusses recent developments in the measurement of affective, or emotional, aspects of behavior as a complement to cognitive measurements. Specific topics include the measurement of attitudes and interests.

Roueche, J., et al. Confronting Student Attitudes. Media Systems Series in Creative Teaching, 1970.

Learning module designed to acquaint instructors with techniques for influencing student attitudes.

Thayer, L., and Beeler, K.D. Activities and Exercises for Affective Education. Washington: American Educational Research Association, 1975.

Forty-nine activities and exercises, each directed to experience and develop the affective component of learning, are included in this book. For example, exercises are designed to develop the following affective components: self-disclosure, communication skills, perceptions of self and others, building trust, etc. Each exercise has been field-tested and some include instruments. The editors recommend that the instructor/facilitator consider these factors: (1) the developmental stage of the learners; (2) the learners' personal needs; and (3) the facilitator's personal competencies. Lack of professional experience and adequate background training have been cited as two prominent limitations.

Appendix 3-1

Affective Characteristics

1. Initiative is the ability to take the first step. Synonymous terms are leadership, readiness, drive, ambition.

2. Enthusiastic/Motivated is characteristic of persons full of interest in a given topic, field, person, or object. Synonymous terms are fervent, interested, concerned.

3. Considerate is the quality of being thoughtful of others. Synonymous terms are respectful, courteous, thoughtful, valued, appreciated, empathetic.

4. Dependable is the characteristic of being someone on whom others are able to rely. Synonymous terms are reliable, trustworthy.

5. Consistent means conforming to a single set of principles. Synonymous terms are harmonious, compatible, connected.

6. Sharing is the ability to divide and give out protions equally. Synonymous terms are participation, sympathy, conveyance, transmission.

7. Cooperative is willingness to act with others. Synonymous terms are helpful, willing, teamwork (spirit).

8. Flexible means the ability to adjust easily to change. Synonymous terms are adaptable, tractable, alterable.

9. Creative means showing originality of thought and actions. Synonymous terms are productive, imaginative, innovative.

10. Confident is the quality of being self-assured. Synonymous terms are sure, certain, positive.

11. Ethical means conforming to or following principles of conduct in a specific profession.

12. Dedicated is the characteristic of being committed to a certain course of action or thought. Synonymous terms are directed, zealous, committed.

13. Perceptive is the ability to have a quick, ready capacity for understanding. Synonymous terms are insightful, aware, knowing, astute, understanding, responsive, observant.

14. Open is the quality of being receptive to ideas or sentiments. Synonymous terms are accessible, candid, frank, sincere, responsive.

15. Decisive/Determined is the ability to end uncertainty and to act firmly. Synonymous terms are conclusive and resolute.

Appendix 3-2

Medical Record Administration
School of Allied Medical Professions
The Ohio State University

COURSE TITLE: Management of a Health Information System

COURSE NUMBER: Medical Record Administration 526

PLACE IN
CURRICULUM: Winter Quarter, Second Year, 5 Credits

Prerequisties: MRA 595
BA 500 or BA 660
AM 630

TEXT(S): Herkimer, Allen J. Understanding Hospital Financial Management. Germantown, Maryland: Aspen Systems, 1978.

Imbiorski, W.L., A. Fox, C.B. Samuels, G. Stearns, and E. Brewer. Evaluating the Quality of Medical Record Services. Chicago: American Medical Record Association, 1979.

McConnell, C. Cost Analysis through Work Sampling in Medical Record Departments. American Medical Record Monograph, 1976 (Number 2).

OVERVIEW:

Medical Record Administration 526 is designed to introduce senior medical record administration students to the practical applications of management theories in a health information system. Topic areas to be discussed include: planning, budgeting, scheduling, objectives, work measurement, work simplification, job enrichment, performance evaluation and quality assurance of the services provided by a health information system.

PHILOSOPHY:

One area that will provide the most challenging experiences for a medical record administrator is the management of a health information system. The coordination of people, resources and technology is a crucial task facing this allied health professional. The medical record administrator offers efficient and cost-effective services to the patient, physician and hospital. The ability to encourage and motivate employees is an essential skill and responsibility of this individual. In addition, the medical record administrator possesses the ability to constructively criticize employees in a manner which facilitates development of the employees full work potential.

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COMPETENCIES:

Upon completion of this course, the medical record administration student will be able to:

1. Develop appropriate goals and objectives to serve as a foundation for the successful management of a health information system.
2. Utilize the planning process to operate a cost effective health infortion system.
3. Apply knowledge of management technology in the administration of a health information system.
4. Utilize basic management principles to develop the necessary human resources for effective operation of a health information system.
5. Plan personal strategies for professional growth and development.
6. Appraise an individual's characteristics in order to develop a compatible personal management style.
7. Assess current literature concerning various aspects of medical record administration and the relevance to current practice.
8. Communicate effectively by utilizing verbal, non-verbal and written communication techniques within the health care environment.
9. Demonstrate the ability to meet defined criteria for individual effectiveness toward course assignments and responsibilities.

UNIT TITLES:

Unit 1: Management Foundations
Unit 2: Management Technology
Unit 3: Human Resources Management
Unit 4: Professional Assessment and Career Planning

ACTIVITIES:

Role-playing
Case Studies
Lecture - Discussion
Group Projects
Field Trips
Guest Presentations
Simulation
Required Readings
Instructional Units
Student Presentations

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EVALUATION:

1. Assignments will be included for each unit and will be submitted on time. A drop of one letter grade for each day an assignment is late will be assessed on students who submit late work. All work shall be typed unless otherwise specified. Two copies of all assignments will be submitted, one for the student file, and one to be graded and returned to the student.

2. Midterm and Final Exams

3. If students do not achieve 72% on the exams, a retest must be scheduled within one week of the exam; the two scores will be averaged.

4. Student mastery of material will be determined by attainment of at least the following levels of competence:

   Assignments: 81%
   Exams: 72%

5. The final grade for the course will be determined according to the following:

Assignments	60%
Midterm	10%
Final	15%
Instructor Discretion	15%
	100%

6. Instructor discretion includes but is not limited to:
   - 6.1 Class attendance (30 points)
   - 6.2 Student's participation in class discussion (20 points)
   - 6.3 Assignments submitted on time (50 points)
   - 6.4 Student's compliance with the following objectives (50 points)
     - 6.41 Objectively and candidly confront and resolve performance and operational problems
     - 6.42 Confront and cope with critical people problems
     - 6.43 Display receptiveness to ideas/opinions/contributions of others in a group situation
     - 6.44 Be aware of and responsive to the impact of oneself on others
     - 6.45 Communicate in a clear, concise manner using verbal and written communication techniques

7. Grading Scale:

A	100-95	C	77-75
A-	94-90	C-	74-72
B+	89-87		
B	86-84		
B-	83-81		
C+	80-78		

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Appendix 3-2(continued)

Medical Record Administration
School of Allied Medical Professions
The Ohio State University

COURSE TITLE: Management of a Health Information System

COURSE NUMBER: Medical Record Administration 526

COURSE OUTLINE

1. Management Foundations

    1.1 Leavitt's Organizational Model
    1.2 Planning
    1.3 Goals
    1.4 Objectives
    1.5 Budgets as plans

2. Management Technology

    2.1 Budgeting
    2.2 Office Layout
    2.3 Quality Assurance of Medical Record Services
    2.4 Work Simplification

3. Human Resource Management

    3.1 Wage and Salary Administration
    3.2 Job Enrichment
    3.3 Scheduling
    3.4 In-Service Education
    3.5 Discipline
    3.6 Counseling
    3.7 Hiring/Firing
    3.8 Performance Appraisal

4. Professional Assessment and Career Planning

    4.1 Management Appraisal Systems
    4.2 Conflict Management and Resolution
    4.3 Career Planning
    4.4 Women in Management

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UNIT TITLE: Professional Assessment and Career Planning

COURSE TITLE: Management of a Health Information System

COURSE NUMBER: Medical Record Administration 526

ENABLING OBJECTIVES:

Upon completion of this unit, the medical record administration student will be able to:

1. Define conflict.
2. Define conflict management.
3. Appraise the types of conflict issues confronting health care providers.
4. Assess the characteristics of professional conflict and their relationship to the MRA.
5. Identify problems of various managerial appraisal systems.
6. Apply appropriate methods of conflict resolution to proposed situations.
7. Evaluate various methods of appraisal systems for managers.
8. Formulate career goals.
9. Construct appropriate plans to achieve career goals.
10. Assess personal characteristics for the development of a compatible management style.
11. Examine the factors affecting the decision to change positions.
12. Evaluate the types of organizational conflict that women managers may face and methods of resolution.
13. Evaluate the types of personal conflicts that women may face and methods of resolution.

ASSIGNMENTS:

1. READINGS: Readings are assigned to reflect the topics for each class. Read the assigned materials prior to class in order to enhance your contributions to the class discussion. Use the "Tentative Class Schedule" as a guide to your reading assignments. Readings will be listed by number as found in the Bibliography Sheets.

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2. LEADERSHIP INSTRUCTIONAL UNITS: After reading the Leadership in Management units, prepare personal assessments of your personal management style.

EVALUATION:

Evaluation for this unit will be based on successful completion of assignments, participation in class and fulfillment of the enabling objectives.

UNIT OUTLINE

4. Professional Assessment and Career Planning

1. Managerial Appraisal Systems
    - 1.1 Problems of managerial appraisal systems
    - 1.2 Schoenhard's method
    - 1.3 Critical incidents
    - 1.4 MBO
    - 1.5 Winstanley's method

2. Conflict Management and Resolution
    - 2.1 Defined
    - 2.2 Types of conflict issues confronting health care providers
    - 2.3 Characteristics of professional conflict
    - 2.4 Types of conflict
    - 2.5 Conflict variables
    - 2.6 Techniques of conflict resolution

3. Career Planning
    - 3.1 Personal goals
    - 3.2 Personal plans
    - 3.3 When to change positions
    - 3.4 Personal leadership style

4. Women in Management
    - 4.1 Organizational conflicts/resolutions
    - 4.2 Individual conflicts/resolutions

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Appendix 3-3

Clinical Site Affective Evaluation

Medical Record Administration
School of Allied Medical Professions
The Ohio State University

Student's Name ______________________________ **Date** ____________________

Clinical Site Name ______________________________ **Hospital** ____________________

Course Number: ____________

	Unsatisfactory	**Satisfactory**	**Outstanding**
Communication The student identifies significant information and relates it (verbal and/or written) to others (patients, staff, site director, fellow students, etc.) in a clear, concise and understandable manner.	LEVEL 1 (a) ____ (b) ____ (c) ____ The student is unable to (a) identify and/or (b) communicate significant or appropriate information in an understandable manner to those individuals with whom she/he is working, (c) the student communicates inappropriate information (information which is not his/her right or responsibility to reveal) to patients, families or others.	LEVEL 2 ____ The student is able to identify significant and/or relevant information and communicate it in an understandable manner with only an occasional need for repetition. Co-workers and patients are readily able to understand the student's instructions and reports.	LEVEL 3 ____ The student rarely has difficulty in identifying and/or communicating significant information. Co-workers and patients find the student's feedback to be clear, concise and understandable.
Confidence The student acts in the clinical setting with assurance in his/her own abilities without overdependence on other. She/he demonstrates a minimum of apprehension and anxiety in new emergency or high-stress situations.	LEVEL 1 (a) ____ (b) ____ (c) ____ The student: (a) depends upon others as demonstrated by not being able to carry out normal or routine activities without constant feedback and/or apprehension, (b) allows apprehension of new, emergency or high-stress situations to control his/her responses, (c) attempts to perform beyond his/her abilities or training.	LEVEL 2 ____ The student functions with minimal supervision when conducting normal activities, and controls anxiety so that she/he may function in new, high-stress or emergency situations.	LEVEL 3 ____ The student is able to function independently with minimal apparent anxiety in high-stress situations.
Empathy The student recognizes the feelings of others and is able to communicate (verbally or nonverbally) about them. In patients, the student recognizes the potential effects of those feelings upon the therapy and is able to modify therapy accordingly.	LEVEL 1 (a) ____ (b) ____ The student: (a) fails to recognize expression of the feelings of others; or, (b) recognizing those feelings, fails to communicate about them or modify his/her approach in order to deal with them.	LEVEL 2 ____ The student recognizes the feelings of others, expresses understanding and concern and modifies his/her actions in order to deal with them.	LEVEL 3 ____ When appropriate, the student actively solicits communication with others about their feelings and deals with those feelings with minimal anxiety. Also, the student communicates with the faculty about the feelings.
Independence The student functions with minimal supervision except when orienting to new or unfamiliar activities or situations.	LEVEL 1 (a) ____ (b) ____ The student: (a) insists on help or supervision even when dealing with activities with which she/he should be familiar; (b) resents or refuses the assistance of others (faculty, staff, etc.) when the assistance is justified.	LEVEL 2 ____ The student only on infrequent occasions requests assistance for routine activities with which she/he has prior experience.	LEVEL 3 ____ The student functions without requesting assistance when performing any routine activity with which she/he has prior experience.
Initiative The student seeks and participates in learning experiences for full utilization of clinical time. This is done without it being required of the student.	LEVEL 1 ____ The student performs only required activities and shows no interest in learning outside of those activities.	LEVEL 2 ____ The student recognizes potential learning experiences, outside normal activities, and participates in them.	LEVEL 3 ____ The student doesn't permit non-learning time to occur but seeks and participates in individual learning experiences when nothing else is available.

Cooperation The student recognizes the need for timely completion of activities and demonstrates this recognition by actively assisting others, when possible or appropriate (appropriate for the student's level of knowledge and/or skills), in completion of their assignments. Also, the student demonstrates a willingness to provide assistance to others (staff, fellow students, etc.)	**Unsatisfactory** LEVEL 1 (a) ____ (b) ____ The student: (a) avoids situations in which his/her aid may be requested by prolonging his/her activities or avoiding contact with those who may request his/her assistance; (b) blatantly refuses his/her assistance (assuming that the requested assistance is within the scope of the student's abilities).	**Satisfactory** LEVEL 2 ____ The student recognizes when it is appropriate to assist and demonstrates a willingness to assist as his/her time permits.	**Outstanding** LEVEL 3 ____ The student makes obvious efforts to complete activities so that time will be available (when it is appropriate) for providing assistance to others.
Judgement The student makes decisions which are appropriate in clinical practice and acts upon those decisions in a suitable manner once they are made.	LEVEL 1 (a) ____ (b) ____ (c) ____ The student: (a) does not make decisions which are appropriate; (b) makes decisions or judgements which are not his/her responsibility; (c) if an appropriate decision is made, she/he is unable to carry it out in a manner appropriate to the student role.	LEVEL 2 ____ The student makes correct decisions and recognizes inappropriate decisions, then responds to those decisions in an appropriate manner.	LEVEL 3 ____ N/A
Maturity The student accepts constructive criticism and uses it for self-improvement. She/he is willing to accept new ideas and techniques and learn from them.	LEVEL 1 (a) ____ (b) ____ The student: (a) reacts defensively to constructive criticism and is unwilling to show improvement based upon that constructive criticism; (b) fails to recognize the need for continued learning as evidenced by an inability to accept or relate to new ideas or information.	LEVEL 2 ____ The student accepts any criticism as constructive and grows and develops because of it. She/he is also receptive to new ideas, theories, or techniques.	LEVEL 3 ____ The student actively solicits constructive criticism in an effort to enhance self-improvement. Also, she/he actively solicits new ideas, theories and techniques.
Organization The student schedules and plans activities for completion during allotted clinical time and plans so that necessary materials and equipment are at hand when needed.	**Unsatisfactory** LEVEL 1 (a) ____ (b) ____ The student either: (a) frequently finds himself/herself without time for completion of assigned tasks; (b) must stop frequently to retrieve equipment or supplies which should have been collected at the beginning of the day's activities.	**Satisfactory** LEVEL 2 ____ The student usually completes all assignments in allotted time and plans possible equipment and needs at the beginning of clinical time.	**Outstanding** LEVEL 3 ____ The student at all times plans clinical time in order to complete assignments and seeks faster ways to accomplish tasks than typical method. Also, schedules needed equipment appropriately and attempts to arrange time in order to assist others.
Professional Ethics The student attempts to improve the practice of medical record administrators' relations with other professionals and health care delivery to the patient. She/he refrains from discrimination (because of sex, age, race, etc.) against others (staff, faculty, patients, students, etc.) and avoids the use of profanity, obscene or degrading language or behavior.	LEVEL 1 (a) ____ (b) ____ (c) ____ (d) ____ The student: (a) frequently criticizes (non-constructively) fellow, professionals, therapy or the department; (b) acts antagonistically to others; (c) acts in a discriminatory manner to others; or (d) language or behavior which is inappropriate.	LEVEL 2 ____ The student interacts with others in a professional, constructive and supportive manner.	LEVEL 3 ____ The student performs in an appropriate and effective manner to change or eliminate non-professional actions or attitudes in others.
Theory Application The student relates didactic knowledge to its applications in the clinical setting.	LEVEL 1 ____ The student is unable through discussion to relate theoretical knowledge to practical application.	LEVEL 2 ____ Through discussion the student is able to relate theoretical knowledge to practical application.	LEVEL 3 ____ The student is able independently to relate theoretical knowledge to practical application.

Clinical Instructor Signature ______________________________ Date ____________

Student Signature ______________________________ Date ____________

Reviewed with (Faculty Signature) ______________________________ Date ____________

Comments: ______________________________

____

____

____

____

____

____

Final Evaluation:

- _____ Unsatisfactory
- _____ Satisfactory
- _____ Outstanding
- _____ Needs Improvement
- _____ Shows Improvement

8/81/VLR/sgm
MRA/SAMP/OSU
Adapted from Respiratory Therapy Division/SAMP/OSU

Appendix 3-4
Helping Professions Inventory
Kent D. Beeler

Use the following list of individuals to answer the questions that appear below. Be sure to respond to each question honestly. Do not project your responses in accordance with how you *think* you should answer.

Directions: A. Take one question at a time and follow it through the complete list of individuals in the left column.
B. Place a check mark (✓) in the proper column for each individual to whom you would answer "No". Also place a check mark if you have to hesitate before answering "Yes".

Question No. 1: Do I feel I can greet this person warmly and welcome him sincerely?

Question No. 2: Do I feel I can accept him honestly as he is and be comfortable enough to listen to his problems?

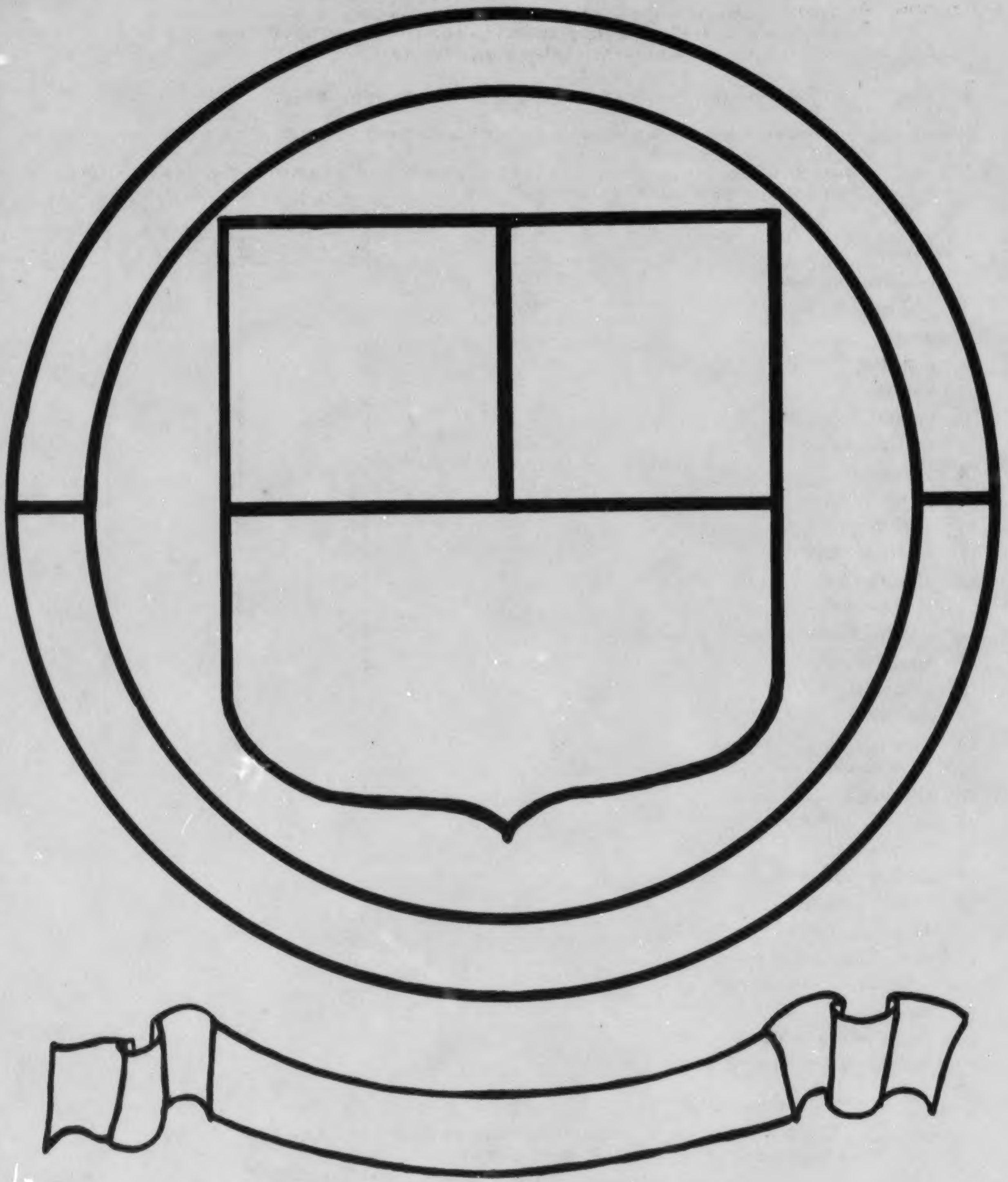
Question No. 3: Do I feel I can say genuinely that I would try to help him come to grips with his problems as they relate to or arise from the label-stereotype given him here?

Individuals	**Question No. 1**	**Question No. 2**	**Question No.3**
1. Oriental-American			
2. Unmarried Expectant Mother			
3. Jew			
4. Amputee			
5. Neo-Nazi			
6. Mexican-American			
7. Family Deserter			
8. Catholic			
9. Senile Senior Citizen			
10. John Bircher			
11. American Indian			
12. Prostitute			
13. Christian Scientist			
14. Cerebral Palsied Person			
14. Black Panther			
16. Italian-American			
17. Homosexual			
18. Atheist			
19. Blind Person			
20. Communist			
21. Black American			
22. Drug Pusher			
23. Jehovah's Witness			
24. Mental Retardate			
25. Ku Klux Klansman			
26. White Anglo-Saxon American			
27. Alcoholic			
28. Mormon			
29. Person with a Facial Disfiguration			
30. Student for a Democratic Society			

FROM: Thayer, Lou and Beeler, Kent D. *Activities and Exercises for Affective Education.* Washington, DC: American Educational Research Association, 1975.

Appendix 3-5

COLLEGE EMBLEM



Appendix 3-6

MEDICAL RECORD ADMINISTRATION
SCHOOL OF ALLIED MEDICAL PROFESSIONS
THE OHIO STATE UNIVERSITY

Professional Appraisal for Medical Record Administration Students

PHILOSOPHY:

Preparation for the role of the medical record administrator requires that students develop insight into their own behavior patterns. Recognition of strengths, shortcomings, and career aspirations are necessary to develop personal strategies for professional growth and development. Progress toward achievement of these personal strategies requires concerted efforts on your part. As a medical record administrator, you will be held accountable for assigned responsibilities and progress toward personal goal attainment. The purpose of this evaluation process is to assist medical record administration students in developing the necessary insights and accountability which will be expected of them.

COMPETENCIES:

Upon completion of this program, the medical record administration student will be able to:

1. Communicate effectively by utilizing verbal, non-verbal, and written communication techniques within the health care environment.

2. Assess professional and personal growth and development by planning strategies to accommodate the dynamic role of the medical record administrator.

3. Demonstrate personal effectiveness through class/group participation and compliance with course requirements.

4. Demonstrate appropriate professional conduct reflective of the professional code of ethics and standards of practice.

ENABLING OBJECTIVES:

Upon completion of this program, the student will be able to:

1. Respect group interaction by contributing to class discussion and group process.

2. Work independently with confidence on course assignments.

3. Attend all class sessions.

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ENABLING OBJECTIVES (continued)

4. Comply with deadlines on all assignments.

5. Develop appropriate responses to assigned responsibilities.

6. Display receptiveness to ideas/opinions of others in a group situation.

7. Show appreciation for the efforts of others by acknowledging and building on their contributions.

8. Create and maintain a presence in any given situation.

9. Remain flexible to changes in assignments, projects, lectures.

10. Adapt to changes in the professional role.

11. Present ideas and thoughts in a clear, concise manner.

12. Make formal presentations with persuasiveness and confidence,

13. Communicate ideas in written format in an organized, concise manner with proper grammar and syntax.

14. Attach a sense of urgency and high level of personal commitment to attaining goals/objectives.

15. Perceive and react to the feelings and needs of others.

16. Be aware of and responsive to the impact of oneself on others.

17. Set one's own direction and goals.

18. Initiate action based on an independent analysis of a situation or problem.

19. Establish short and long range personal, professional and departmental goals/objectives.

20. Develop an appropriate course of action for self and/or others to accomplish those objectives.

21. Identify specific accomplishments, the sequence in which they are to be done, who is to do them, and the timing for the completion.

22. Establish follow up systems and feedback mechanisms to insure tasks are being accomplished on time.

23. Be "on top" of work progress at any given time.

24. Weigh relevant data and draw sound conclusions.

25. Willingly risk the unknown to expedite the course of action.

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ENABLING OBJECTIVES (continued)

26. Confront and cope with critical people problems or any other emotionally difficult situation.

27. Objectively and candidly confront and resolve performance and operational problems.

28. Express feelings openly and candidly.

29. Be forthright and admit to shortcomings.

30. Use appropriate knowledge in medical record administration to complete course assignments and responsibilities.

INSTRUCTIONS:

1. Given the above list of objectives, students will prepare a set of personal objectives. These objectives will be chosen in light of improving personal and professional goals.

2. Complete forms 1A and 1B using the selected objectives and personal insights. Students may wish to select and develop their own objectives as well as use the list provided.

3. Self-appraisal forms will be completed by each student at the beginning of each quarter. The selected objectives will be discussed at an appointment scheduled with each advisor.

DATE DUE:

Forms 1A and 1B:

Appointment with advisor:

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Chapter 4

Educational Objectives

INTRODUCTION

The purposes of this chapter are to describe more fully the criteria of terminal and enabling objectives, to describe the levels of objectives in each of the three domains (cognitive, affective, and psychomotor), and to show the relationship of objectives to competencies and responsibilities of the medical record profession. Examples are provided to assist educatiors in preparing or revising objectives in their academic settings.

EDUCATIONAL OBJECTIVES AND COMPETENCIES

Competencies are global statements that describe what a professional practitioner must do to meet the responsibilities required by his/her profession. The attainment of competencies are the objectives of the educational program. Terminal objectives (general instructional objectives) describe behaviors that a student needs to attain by the end of a course of instruction. Enabling objectives (learning outcomes) are statements that describe behaviors that students demonstrate as they progress toward mastery of the terminal objectives.

TERMINAL AND ENABLING OBJECTIVES

Once competencies have been determined for specific responsibilities, the terminal performance objectives must be developed (see Chapter 1 for detailed information on objective development). These terminal objectives are specific statements of the behaviors contained within the competency. Enabling objectives are then delineated which provide steps the student would take to acquire the skills outlined in that terminal objective. Examples of both types of objectives for MRT education are as follows:

Responsibility: Follow existing procedures for the manual collecting and processing of administrative and clinical statistics.

Competency: Prepare hospital census statistics.

Terminal Objective #1

The student will calculate hospital census statistics for a non-computerized data collection and reporting system.

Enabling Objectives:

1a. Given sample data and without reference, categorize the following types of patients on census worksheets with ___% accuracy:

adult inpatient
child (pediatric) inpatient
hospital live birth
hospital inpatient admission
intra-hospital transfer
patient on leave of absence
hospital inpatient discharge
hospital inpatient death

1b. Given sample data and without the aid of references, calculate the census and inpatient service days for one nursing unit for one day with ___% accuracy.

1c. Given sample data and without the aid of references, compute the census and inpatient service days for an entire hospital for one day with ___% accuracy.

1d. Given sample data and without references, compute a monthly census report with ___% accuracy.

Terminal Objective #2

The student will compute averages and percentages using data collected from census information.

Enabling Objectives:

2a. Given sample data and without references, compute the following monthly and annual census statistics with ___% accuracy:

Total inpatient service days
Inpatient bed count days (total)

Average daily census
Percent of occupancy
Direct and indirect bed turnover rates

2b. Given sample data and without the aid of references, calculate percentage of occupancy and bed turnover rate when there is a change in bed count with _____% accuracy.

MAJOR COMPONENTS/CRITERIA OF OBJECTIVES

According to Mager (1962, 1975), there are three major components or critirea of well-written objectives. The first criterion is that the objective state, as specifically as possible, what the student will be able to do and in measurable terms. It is best not to use such general behaviors as "know", "understand", or "have insight into" for enabling objectives, since there are differences in the interpretation of their meanings. It is important to use measurable action verbs to specify performance. The use of precise action verbs makes it easier to sequence objectives and to evaluate student performance.

The second criterion is that the objective state under what conditions the student will be asked to do something. Conditions are considered statements which describe the environment in which a student will demonstrate performance. It may be that certain equipment will be available (computer terminal, microfilm machine), that the performance is expected in a simulated rather than actual situation (case study or laboratory setting), that performance is expected on a test (without reference) rather than on a homework assignment (with reference), or that behavior will be observed at a clinical practice site. It is often referred to as the "Given".

Example #1

> Given sample cancer patients' medical records, tumor registry abstract forms, and instruction manual, abstract information from the records onto the prescribed forms with 80% accuracy.

Example #2

> Given sample institutional policies and sample consent forms, the student will be able to critique each consent form for its design and content and recommend any necessary changes.

Example #3

Without reference, define the following terms related to a health care facility: licensure, certification, accreditation.

The following are conditions of performance classifications that can be specified in behavioral objectives (Adkison, 1970):

Given prerequisite knowledge, behaviors, or skills
(specify the prerequisite knowledge, behavior, or skill).

Given maturity
(entry from previous class, unit, or activity).

Given specific abilities, capabilities
(specify, for example, being able to read medical terminology; being able to calculate hospital formulae).

The following are specific conditions of performance which may be transferred to an appropriate objective (Adkison, 1970):

With minimum reference to . . .

With reference to . . .

After practicing . . . (specify)

After arranging into groups . . .

Given definitions . . .

Given one or more problems . . .

Given a role-playing situation on . . .

Given a case study on . . .

Given a document (specify: medical record, abstract, procedure manual, published information, plan, guidelines) . . .

Given information acquired on . . .

Given access to . . .

Given data regarding . . .

Given resource constraints . . .

Given methods and equipment . . . (specify)

Given a testing situation . . .

Given pertinent evaluative data . . .

Given results of . . .

Given predetermined standards or requirements for . . .

Given a completed . . .

Given a topic, concept, or activity . . .

Given a length of time . . . (specify)

(Note: This list is not exhaustive; add to the list at will.)

The third criterion is that the objectives specify how well the learner must perform to be considered acceptable. This criterion includes the minimal acceptable standard and the means by which the behavior will be measured.

EXAMPLE:

Given a case study from a health facility, identify the potential computer applications on a written test with 80% accuracy.

The following are examples of minimal acceptable standards which may be applicable to a variety of behavioral objectives (Adkison, 1970):

- Numbers, totals, or percentages (8 out of 10; 80%)
- Scores of measurements (score of 130 on X test)
- Listings, steps, or sequences (complete through item 10)
- Occasions, attempts, practice tries (at least three or best of three)
- Change in affective behavior from beginning student behavior as previously evaluated, assessed, or observed

- Demonstration, act, manipulation (psychomotor) (specify) explicitly the correct method which will be measured; typing report without looking at keys; transferring a phone call without cutting party off; answering phone by saying . . .

Mager points out that the three components need not be given for each objective: the behavior component is always stated but the conditions and/or standard components may be omitted from some objectives if they do not apply. There is no requirement for objectives to be written as a single sentence. More than one sentence may be needed to describe an objective.

While the "Mager-type" objective appears to be the best known, other authors have written extensively on the subject and have developed their own models for objective writing. For example, Gagne' and Briggs (1974) refined the Mager type of objective. They make a distinction between "action verbs" and "learned capabilities". They believe that learned capabilities are the important verbs and include the following: "discriminates", "identifies", "classifies", "demonstrates", "generates", originates", "states", "executes", and "chooses". They believe the five components of an objective are:

1. Situation: situation which faces the learner when asked to do something
2. Capability to be learned: kind of performance the learner is expected to demonstrate
3. Object: what has to be produced or processed
4. Action: behavior as described by an action verb
5. Tools and other constraints: how the performance must be carried out

EXAMPLE

1. Situation: Given a home health care medical record
2. Capability: the student demonstrates
3. Object: the knowledge of the JCAH recommended documentation
4. Action: by analyzing the record for completeness
5. Constraints: without the use of reference materials and with 80% accuracy.

CLASSIFICATION OF INSTRUCTIONAL OBJECTIVES (DOMAINS)

Instructional objectives are classified into one of three domains: cognitive, affective, and psychomotor. Cognitive objectives describe the knowledge that must be acquired by the student. In the affective domain, objectives are directed toward developing the interests, attitudes, values, and judgments of the student. Objectives in the psychomotor domain pertain to the student's ability to perform certain motor skills. A competency required of the student may involve one, two, or three of these domains. Instructional objectives in the area of management for the student in a medical record administration program, for example, would include both the cognitive and affective domains. Instruction in the area of medical transcription includes knowledge of medical terminology, psychomotor skills (typing and listening to dictated material at the same time), and affective characteristics (desire to be accurate on the job).

TAXONOMIC HIERARCHY

Within each of these domains, behavioral objectives need to specify the level of performance (taxonomy) expected of the student. For example, cognitive objectives vary from simple recall of information (implying memorization only) to application of knowledge, creative thinking, and evaluation.

The need for objectives written at various levels led Dr. Benjamin S. Bloom of the University of Chicago and other college and university examiners to devise a framework or taxonomy showing a classification of educational objectives. In 1956, the Taxonomy of Educational Objectives; Handbook I: Cognitive Domain, written by this group, was published.

Cognitive Domain

The cognitive taxonomy of Bloom (1956) divides the cognitive educational objectives into the following six categories ranging from simple to complex:

	Cognitive Domain	(i.e., intellectual processes of the learner)
SIMPLE	Knowledge - - - - -	recognition and recall of information, terms, classes, procedures, theories, and structures, etc., learned previously
↑	Comprehension - - -	interpretation of what has been learned (meaning)
↕	Application - - - -	use of knowledge in new situations
↕	Analysis- - - - - -	breaking whole units into related parts using selected knowledge and skills (deduction)
↓	Synthesis - - - - -	combining elements into new wholes, original, creative thinking (induction)
COMPLEX	Evaluation- - - - -	judging materials and methods using standards or criteria

Bloom's taxonomy further divides each of these levels into 20 subcategories of understanding and behavior that also range from the simple to the complex. All of the major categories and subcategories are arranged in hierarchical order; i.e., they are arranged in successive order so that each classification level and its subcategories are thought to include and be dependent upon the one preceding it.

It is extremely important to determine at which level the student is to perform and then to write the objective and related test items at the level desired. If the objectives are written at the first level (knowledge), it would be unfair to test the student at a higher level. For example, the objective is stated as follows:

> List and define the four components of a problem oriented progress note.

If a test item used to measure student achievement of this objective includes a narrative progress note which a student is required to change into SOAP format, the instructor would be testing at a higher level than the objective indicated. Therefore, the student may not be able to answer the question correctly. The reason for this is that the objective was stated at the knowledge level and the test item was written at the application level. The two levels need to be consistent.

Another important rule is that the higher levels subsume the lower categories. In other words, if an objective is written at the higher synthesis level, it means that a student must be able to perform the behaviors in the lower knowledge, comprehension, application, and analysis levels. The reverse, however, is not true. If the objective is written at the lower application level, it does not mean the student will be able to perform in the higher levels (analysis, synthesis, evaluation).

Using the previous illustration of the SOAP progress note, it would have been better to have written the objective as follows:

> Given a sample narrative progress note, modify the information into SOAP format.

This implies that the student knows and comprehends the meaning of the SOAP format and can apply this in a hypothetical situation.

A "verb list" is a very important reference to use when writing behaviors to assure that the level of expected student performance is clearly stated. Figure 1 is an action verb list for the cognitive domain which will be a useful reference for writing behavorial objectives.

Figure 1
Action Verb List for Medical Record Education
(Arranged in Taxonomic Hierarchy)

1

Knowledge

define
describe
identify
label
list
match
name
outline

recall
record
relate
repeat
reproduce
select
state
underline

2

Comprehension

convert
defend
describe
discuss
distinguish
estimate
explain
express
extend
generalize
tell
identify
infer

locate
paraphrase
predict
recognize
report
restate
review
rewrite
summarize
give example
translate

3

Application

apply
carry-out
change
code
comply
demonstrate
discover
dramatize
employ
follow
follow-up
illustrate
interpret
interview
maintain
manipulate
modify

operate
perform
practice
predict
prepare
produce
relate
respond
retrieve
schedule
screen
shop
show
sketch
solve
transcribe
use

4

Analysis

abstract
analyze
appraise
audit
break down
calculate
categorize
compare
contrast
criticize
debate
determine
diagram
differentiate
discriminate
distinguish
edit
examine
experiment

identify
illustrate
infer
inspect
inventory
investigate
outline
point out
question
relate
review
select
seperate
solve
subdivide
test

5

Synthesis

advise
arrange
assemble
categorize
collect
combine
communicate
compile
compose
conduct
construct
contribute
coordinate
counsel
create
design
develop
devise
establish
explain
formulate
gather
generate
incorporate
instruct

manage
modify
organize
plan
prepare
propose
rearrange
recognize
recommend
reconstruct
relate
revise
rewrite
set-up
summarize
supervise
tell
update
write

6

Evaluation

appraise
assess
choose
compare
conclude
contrast
criticize
describe
discriminate
enforce
estimate
evaluate
explain

interpret
judge
justify
measure
monitor
rate
relate
revise
score
select
summarize
support
value

Adapted for *1981 Upoate of Roles and Functions of Medical Record Personnel* by Task Group B, ERD Project, from *Review and Verification of Roles and Functions of Medical Record Personnel at Two Levels.* Chicago, AMRA, September, 1978. p. II-6.

The following is an example of statements of responsibility, competency and a terminal objective in medical record practice followed by a series of enabling objectives in each of the six levels of the cognitive domain. More enabling objectives, naturally, would need to be written for the unit of instruction to assure that the student met the terminal objective.

EXAMPLE:

Responsibility:	Revise procedures for quantitative analysis of health records.
Competency:	When given an institution's policies and procedures for quantitative anlaysis of discharged patients' records and information relative to the accuracy, efficiency, and scope of this activity in a medical record department setting, the practitioner will revise these policies and procedures where appropriate.
Terminal Objective:	When given sample policies and procedures for an institution's method of analyzing medical records for accurate and complete documentation and provided a management case study, the student will evaluate the effectiveness of the system and make recommendations where appropriate.
Enabling Objectives:	Knowledge Without references, list all twelve items of information required in a physician's discharge summary. Comprehension After reading assigned material, verbally explain in a classroom setting the major purposes for quantitative analysis of discharged patient medical records. Application In a laboratory setting, demonstrate proper quantitative analysis procedures by completing chart deficiency slips on five health records within 45 minutes with 80% accuracy. Analysis Given access to assigned reading, diagram in a flow chart all steps involved in quantitative analysis of medical records. Synthesis Given information regarding the role of the medical record department in risk management, devise a system to incorporate generic screening of incidents and accidents into chart analysis procedures. Evaluation Given a management case study, assess the quality and cost effectiveness of a department's quantitative analysis policy and procedure and revise where appropriate.

McGuire developed a simplified cognitive taxonomy (Buckwalter, 1981). Instead of using the six levels developed by Bloom, et al, objectives and test items are classified into three levels:

Level I	Recognition and recall of isolated information
Level II	Comprehension and interpretation of data
Level III	Problem-solving

EXAMPLES:

Level I
Without reference, describe the mechanics of terminal digit filing.

Level II
Given a case study describing an ambulatory care clinic's method of filing alphabetically, justify a recommendation to convert to terminal digit filing.

Level III
Given a case study describing an ambulatory care clinic's method of filing alphabetically, write a proposal for implementation of conversion to terminal digit filing including equipment and supplies needed, time frames for conversion, inservice training needs, and methods to evaluate the results of the conversion.

Affective Domain

In 1964, the *Taxonomy of Educational Objectives: Handbook II: Affective Domain* was published written under the direction of David R. Krathwohl. This domain provides five hierarchical classification levels with subcategories:

Affective Domain	(i.e. emphasis on emotional processes such as feelings, interests, values, and adjustments)
Receiving - - -	passive attention to stimuli (i.e. sensory inputs)
Responding - - -	reacting to stimuli (complying, volunteering)
Valuing - - - -	actions consistent with a belief or value
Organization - -	commitment to a set of values (discussion, formulating values, choosing among values)
Characterization-	total behavior conforming to internalized values (e.g., philosophy)

Figure 2 is a listing of action verbs applicable to the affective domain.

Figure 2
Action Verb List for *Affective* Domain*
(Arranged in Taxonomic Hierarchy)

	1 **Receive**	2 **Respond**	3 **Value**	4 **Organize**	5 **Characterize'**
Definition	Getting student's attention to stimuli. •Awareness of sensory inputs. •Willingness to accept stimuli. •Controlling or selecting sensory input.	Active responding to stimuli by student. •Complying with directions •Expressing willingness to comply. •Finding satisfaction in complying. •Seeking out activities, interests; exceeding expectations.	Displaying behavior consistent with a belief or value; internalization. •Expressing acceptance of value; preference for a value. •Supporting viewpoints. •Revealing commitment.	Commitment to values by assembling different values and resolving conflicts. •Comparing, discussing, judging values. •Formulating a value system.	Total behavior consistent with internalized value systems (life style). •Resolving conflicts with consistency. •Completing a set of values. •Acting according to total, consistent philosophy of of life.
Examples	accept watch listen focus select wait for submit to notice endure is aware of	ask read adapt reply offer comply answer choose follow inquire refrain welcome hesitate practice desire to verbalize volunteer participate	aid join rate adopt argue rebut debate defend accept assist echo acknowledge reject specify support protest narrate discuss appraise campaign criticize	enact admit shape weigh commit discuss resolve compare embrace exercise practice organize establish construct formulate incorporate	show portray reveals rehearse personate delineate synthesize demonstrate characterize particularize

*non-exhaustive.

SOURCE: Adkison, M.R., et.al., *Designing Instructional Strategies,* 1970. (photocopy, copyright applied for). (Used with permission, M.R. Adkison)

The techniques for writing objectives in the affective domain are no different than those used to write objectives in the other domains. One first identifies the characteristics desired in the affective domain and then determines the desired type of behavioral outcome most appropriate for evaluating whether the student has achieved success in this competency. (Refer to Chapter 3 for additional information regarding affective characteristics).

The student activities in the affective domain are particularly difficult to measure; this makes writing the condition and evaluation components of the behavioral objective very difficult. "Whereas the cognitive domain asks the question 'What can the learner do?', the affective domain poses the question 'What will the learner do?' This means that the teacher must become very ingenious at devising evaluation situations in which the learner is permitted to behave with almost no cues from the teacher"(Popham and Baker, 1970).

EXAMPLE:

A behavioral objective in the affective domain which includes all three components:

Condition:	Given informal settings and formal environments (classroom, clinical practice site)
Behavior:	Demonstrates courtesy, respect, and cooperation with fellow students, instructors, and clinical practice employees/supervisors
Evaluation:	This will be evaluated by instructor observation and clinical practice supervisor written evaluation of student performance

In many cases, the condition and/or evaluation component cannot be stated for affective objectives. For example, the student will develop a desire for life-long learning. One would not know if a student has internalized a particular value until several years after graduation. However, it is still important to include at least the behavioral components of objectives in the affective domain since they are important goals in the education of students.

EXAMPLE:

Behavioral objectives for each level of the affective domain in the area of confidentiality of patient information:

Receiving	After classroom presentations on the basic purposes of confidentiality of patient information, answer correctly 80% of the items in a written evaluation.
Responding	In discussion groups on confidentiality of patient information, voluntarily ask questions and discuss the issues and implications related to the classroom presentation on confidentiality.
Valuing	In a clinical setting, demonstrate problem-solving abilities regarding release of confidential information using justifications from legal and regulatory requirements as well as personal values regarding importance of protecting patient confidentiality.
Organizing	On the student's own time and own volition, collect and organize all materials obtained which integrates the various policies and procedures regarding release of information and confidentiality.
Characterizing	When approached on both a professional and informal basis, share expertise in the principles of confidentiality and release of information with friends and colleagues.

Figure 3 gives examples of terminal and enabling objectives in the affective domain. Each objective is followed by a parenthetical statement of the level of the objective.

Figure 3

Responsibility: Maintain professional skills as the profession changes with time.

Competency: Plan personal strategies for personal growth and development.

Terminal Objective #1: The student will complete a personal/professional improvement plan. (organizing)

Enabling objectives:

a. Given assigned readings, define and discuss the meaning of a professional. (responding)

b. Given techniques for personal assessment, select one and apply to a personal plan. (responding)

c. List various experiences which may serve to enhance professional growth. (organizing)

d. Explain the professional continuing education requirements. (responding)

e. Demonstrate understanding of continuing education documentation requirements by completing each of the AMRA recording forms. (responding)

f. Offer to evaluate and be evaluated by peers when serving in a professional capacity. (valuing)

g. Given a professional improvement plan outline, demonstrate ability to incorporate self-assessment techniques, selected educational experiences and professional association requirements into one plan for professional development. (organizing)

Terminal Objective #2: The student will evidence commitment to the medical record profession. (characterizing)

Enabling objectives:

a. Given state or local association meeting dates, acknowledge your commitment to the profession by attending a meeting. (valuing)

b. After attending a professional association meeting, evaluate the opportunities for involvement and select a level of participation compatible with your interests and abilities. (valuing)

c. Given the opportunity to support the profession, assist others in making a decision to pursue a career in medical records. (characterizing)

(Figure 3, continued)

(Figure 3, continued)

d. Given the opportunity to educate consumers about medical records, convey the value and impact of the consumer's direct communication in the development of the record (addition, deletion, or correction) for use by health care providers. (characterizing)

e. Given one or more situations, describe reasonable solutions which would emphasize patient advocacy. (valuing)

Terminal Objective #3: The student will demonstrate principles of ethical conduct governing the medical record profession. (characterizing)

Enabling objectives:

a. Given the AMRA Code of Ethics and a series of hypothetical situations, determine which is ethical or unethical according to the code. (responding)

b. Given a series of hypothetical situations, determine the appropriate ethical action for each. (valuing)

c. Formulate a value system based on the Code of Ethics. (characterizing)

Fig. 3: Terminal and enabling objectives in the affective domain. (Hanken et al, 1980)

Psychomotor/Skill Domain

Psychomotor objectives are those which, according to Simpson (1972) "emphasize some muscular or motor skill, some manipulation of materials and objects, or some act which requires a neuromuscular coordination."

Adkison (1970) has given the following taxonomic levels for the psychomotor domain (i.e. emphasis on motor behaviors involving neuromuscular coordination):

Perception - - - - sensitivity to stimulus normally leading to action (e.g. cue, sensing)

Preparation- - - - involves readiness to perform (e.g. possesses knowledge, bodily stance, willingness)

Orientation- - - - knowing and/or deciding an appropriate response to be made

Practice - - - - - trial and error behavior toward developing correct responses (responses are both correct and incorrect in random choices)

Pattern- - - - a learned response that is habitual, smooth, and confident (e.g. a skill pattern of low error response)

Performance- - response that is a complex motor action involving a high degree of skill (e.g. polished behavior, complicated responses made with ease and control)

Figure 4 is an action verb list that can be used when writing behavioral objectives for the psychomotor domain.

Figure 4
Action Verb List for *Psychomotor* Domain*
(Arranged in Taxonomic Hierarchy)

1

Perception

Sensitivity to or awareness of.

notice
detect
discover
feel
hear
identify
note
become aware of
see
recognize
observe
perceive
select
sense
separate

2

Preparation

Readiness to act.

adapt
adjuct
act ready
get ready
put in order
make arrangement
prepare
ready
organize
plan
select

3

Orientation

Decide which response to make.

begin
change
take position
adjust to condition
locate
relate

4

Practice

Trial and error responses; correct response is at level of chance.

act out
change
choose
correct
exercise
identify
observe
practice
perform
select
train
try
use
drill
observe

5

Pattern

Habitual response; smooth, confident; meet standard of goodness.

demonstrate ability
demonstrate correct form
demonstrate skill
learn rapidly
make few errors
perform smoothly
perform confidently
respond quickly
learn quickly
learn quickly
show style
set up quickly
set up accurately
respond consistently
perform
demonstrate

6

Performance

Complex motor action performance at level of excellence.

become model
demonstrate correctly
execute skillfully
meet new condition without hesitation
perform extremely well
perform habitually
perform with expertise
conform to high standards

*non-exhaustive

SOURCE: Adapted from Adkison, M.R., et.al., *Designing Instructional Strategies*, 1970. (photocopy; copyright applied for). (Used with permission, M.R. Adkison)

Objectives in the psychomotor domain are very helpful to those educational endeavors generally outside the medical record field (e.g. music, art, athletics) and are useful for those allied health practitioners (e.g. physical therapists, nurses, medical technologists) who engage in physical activities related to their job.

The following are activities in the psychomotor domain which might be performed by medical record practitioners in their employment setting, in which some dexterity is needed:

- typing
- assembly of discharged patient's records
- filing
- using general office equipment (computer terminals, photocopy machines, microfilm machines)
- medical transcription

General typing skills and use of general office equipment are normally taught by business education instructors rather than medical record instructors or are skills easily learned on-the-job (e.g. the use of photocopy machine).

Objectives in most taxonomic levels in the cognitive and affective domains are very appropriate for assembly of discharged patient records, filing, computer applications in health information systems, etc., but objectives in the psychomotor domain are not normally written for formal academic health information courses. There is only one subject in the field of medical records that lends itself to psychomotor educational objectives- and that is medical transcription for medical record technician students. While medical record administration students (as well as medical record technicians) have behavioral objectives in the cognitive and affective domains in the area of medical transcription - e.g., how the machines work, type of equipment available, systems design, need for accuracy by transcriptionists, etc. - medical record administration students normally do not spend time becoming proficient in this skill and, therefore, psychomotor objectives would not be written. Medical record technicians need to have a basic skill level in this activity but need not be as proficient as the student who plans to be a medical transcriptionist.

EXAMPLE:

Behavioral objectives for each level of the psychomotor domain in the area of medical transcription.

Perception	After observing the instructor's demonstration, describe the component parts of a transcription machine.
Preparation	In a laboratory setting and prior to performing transcription, obtain and organize all reference materials and supplies.
Orientation	In a laboratory setting, when encountering an unfamiliar word, locate in reference material and type the correct spelling.
Practice	In a laboratory setting, practice typing dictated medical reports.
Pattern	In a laboratory setting, with a typewriter and transcription machine, transcribe dictated medical reports with 80% accuracy five minutes of dictated material in ____ minutes.
Performance	In a clinical practice setting, demonstrate expertise by transcribing with 95% accuracy, one hour of any type of dictated medical report in ____________________ (time).

Since lower level objectives are subsumed in higher level objectives, the medical record technician instructor may wish to write behavioral objectives in the psychomotor domain for medical transcription only in the practice and/or pattern levels. The student wishing a career in medical transcription would have objectives in the practice, pattern, and performance levels. The objectives in the perception, preparation, and orientation levels may be too basic for some purposes.

It is important to remember that the classification of objectives is a helpful method to assure that objectives are comprehensive. Gronlund (1978) indicates that an objective often overlaps into more than one domain or taxonomic level (e.g. is assembly of records a psychomotor activity or is it an application of the cognitive domain?). The classification systems serve as guides in objective writing but an inordinate time should not be spent trying to classify overlapping behaviors.

Another way to classify a learning objective is to determine whether it is an intention to change an ability or tendency or both. Johnson's A Teacher's Taxonomy of Learning Outcomes (1973), gives the following definitions:

ABILITIES: Change the effectiveness of a person's behavior, including:

1. Knowledge: Merely remembering the appropriate response.
2. Skill: The execution of a series of two or more steps and/or a pattern of simultaneous behavior elements.
3. Understanding: Seeing or dealing with some relationship.

TENDENCIES: Increase or decrease the incidence of a person's behavior under any given set of circumstances, including:

1. Interest: A tendency which has no emotional or feeling dimension and requires no condition except an opportunity to manifest itself.
2. Attitude: A tendency in which a feeling or emotional dimension is involved having an object (whatever arouses the feeling or emotion) and a characteristic response to that object.
3. Habit: A tendency which appears only in certain circumstances or under certain conditions.

Figure 5 provides the following model for classifying abilities and tendencies:

ABILITIES	TENDENCIES
May be described as saying: Learner is able to ________ to this degree 0 1 2 3 4 5 not at all — perfectly, or as well as anyone	May be described as saying: Learner tends to ________ to this degree 0 1 2 3 4 5 not at all — all the time or whenever possible
Couldn't before learning	Didn't before learning
Usually assessed by using tests	Usually assessed by using inventories
Assessed when doing one's best	Assessed when behaving typically

Fig. 5 Characteristics of Learning Products (Johnson, 1973)
(Used with permission, Harry Johnson)

Each objective is followed or preceded by the first letter of the type of behavior. More than one type of behavior would be applicable for most objectives.

EXAMPLE:

TERMINAL OBJECTIVE:

Value the need for ongoing self-education in medical records for the maintenance of professional competencies.

ENABLING OBJECTIVE:

The student will be able to:

LEVEL	PERFORMANCE
K U I A	1. In discussion groups on medical record topics, voluntarily ask questions and discuss issues related to the rapid growth of medical information.
I A	2. On his/her own time, voluntarily read or otherwise obtain information on medical record which s/he brings to class to be shared with classmates.
K U I A	3. Discuss the need for ongoing self-education in medical records.

K = Knowledge
U = Understanding
S = Skill
I = Interest
A = Attitude

ACTION VERB LEVEL DETERMINATIONS

There are two recognized categories of practitioners in the field of medical records (medical record technician and medical record administrator). Instructional activities, length of instruction, and expected student outcomes based on identified competencies at the job entry level must be addressed to demonstrate these differences. Chapter 2 presented the responsibilities expected at the entry level for both levels of medical record practitioners. It is important to review these responsibilities and to take note of the verbs used in the verified statements to determine which verb level to use in the taxonomy of educational objectives. In some instances, the level of objectives in a unit of instruction is the same for the technician and administrator and in other instances, they are quite different.

EXAMPLE: Objectives which compare and contrast the action verbs used in objectives for the two levels of medical record practitioners at the entry-level.

Objectives	Taxonomic Level*	Objectives	Taxonomic Level
Medical Record Administrator		Medical Record Technician	
1. Evaluate current organizational modes of health care delivery.	III	1. Describe the current organizational modes of health care delivery.	I
2. Apply appropriate legal principles and procedures to situations affecting the control, use, and release of health information.	II	2. Same as MRA	II
3. Demonstrate an understanding of the techniques and equipment utilized in transcription of medical reports.	II	3. Transcribe dictated medical reports.	II
4. Given a case study, organize a staff development program appropriate to the needs of the facility and level of departmental employees.	III	4. Give examples of methods used for orientation and continuing educational development of employees.	II
5. At a clinical setting, apply appropriate quantitative models for problem solving and decision making such as descriptive statistics and decision trees.	III	5. None	
6. Assure validity of abstracted health care data.	III	6. Given a sample medical record and computer input form, abstract required medical data onto the required form.	II
7. Given a case study, design the most appropriate computer system to meet the needs of the facility.		7. Given a case study, identify the potential computer applications.	II

*note: Classified according to the McGuire taxonomy (Buckwalter, 1981), using three levels of complexity. Level I: Recognition and Recall, Level II: Comprehension and Interpretation of Data, Level III: Problem Solving.

It is important to understand that while there are national and regional variations as to expected levels of competencies for both MRA and MRT entry-level practitioners, some standard must be maintained to assure that a basic level of competence is met nationally. All students must be competent at those levels of responsibilities identified in Chapter 2. While enabling objectives may be written at lower levels, the terminal objectives must be written at the appropriate level to ensure that the student will meet the identified competencies. If entry-level practitioners need to be competent at higher levels in a particular responsibility in certain regions of the country, the academic program instructors would have the flexibility to write objectives at higher levels.

SUMMARY

This chapter has provided guidelines in the development of behavioral objectives and has given examples for the medical record profession. Well-written behavioral objective serve many purposes:

1. They provide accountability to the public as to the extent of learning that has taken place.
    a. Parents, taxpayers, funding agencies, employers, and others know on request, what is being taught.
    b. Accrediting agencies (CAHEA,AMRA) can review the instructional objectives in their evaluation of an academic program.
2. They provide a means for educators to design and evaluate the instructional program.
    a. The evaluation of an instructor's ability to teach is enhanced by the use of behavioral objectives. If students in a class are able to meet well-defined and approved objectives, then learning has taken place.
    b. Written behavioral objectives help eliminate content repeated in different classes or inadvertently missed.
    c. They assist in the design of courses which can be taught by different instructors resulting in the same student outcomes.
    d. Written behavioral objectives help the educator select appropriate learning activities or develop alternative instructional methods.

  e. Well-written objectives help the educator design student evaluation tools and provide objective rather than subjective instructor evaluation.

  f. Instructional objectives help faculty assess the competencies of transfer students, students returning to school, and those students with previous experience in health information systems in order to determine the student's placement in the curriculum.

3. They provide assistance to students in helping them achieve the expected learning required in the academic program.

  a. They communicate to the learner what competencies are expected by the end of a unit of instruction. The objectives assist in further defining what competencies are expected of the medical record professional.

  b. They provide students with a system of self-evaluation during a course so that they can determine for themselves when they have mastered a behavior and when they need to obtain additional assistance from an instructor.

  c. Progress depends upon performance rather than time spent in class, and learning is directly related to objectives rather than the mode of instruction.

  d. Since students know, in advance, how they will be evaluated, it removes the traumatic "guessing game" employed by students in trying to determine what to study at the time of examinations or evaluations.

The ability of behavioral objectives to enhance student learning will be compromised if:

1. the students are not provided a list of objectives at the beginning of a unit of instruction,

2. the objectives are ambiguous,

3. student evaluation after a unit of instruction is not consistent with stated objectives, or

4. the list of objectives is incomplete.

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Chapter 5

Student Learning: Principles, Preferences, Strategies

ABSTRACT

This chapter addresses the medical record educator's relationships with students, in terms of ways an instructor may address the students' learning needs.

The stimulation of student motivation is as much the responsibility of the teacher as is content of a course. Student motivations for learning influence their success or lack of success in the learning environment, and ultimately their performance in practice. A brief summary of major approaches to education is provided, as well as seven principles of learning which address student motivation and response methodologies a teacher can use. Examples illustrate how these principles may be applied in medical record education.

Research has been conducted to determine the learning preferences of medical record students and practitioners. Results of this research are described, and suggestions are made for the appropriate use of information these studies have supplied.

Learning strategies which can be employed by medical record educators, to provide a variety of learning experiences for their students, are defined. Examples of each learning mode are provided, which address subjects common in medical record program curricula.

References for further review of chapter content, and for individual use of learning preference instruments to aid the medical record educator in responding to student learning needs, are provided in the Bibliography.

5

GLOSSARY

computer-assisted instruction	teaching and learning which occur as interactions between teachers, students, course materials, methods, and the computer
critical incident techniques	problem occurrences or events characterized by risk or uncertainty, simulating some aspect of medical record practice which helps students better to understand, enjoy, predict, and/or control analagous situations in actual practice
independent learning	use of instructional packages to promote learning
learning mode	a distinct way of arranging content and materials of a course and/or topic with knowledge, skills, and attitudes to be learned, so as to provide maximum benefit for the student required to demonstrate that learning has taken place
learning preference	choice of one learning situation over another, as identified by the learner
learning strategy	a careful plan or method designed to reach specific learning objectives
small group learning	learning which takes place through the combined efforts and interactions of several students
student-structured learning	learning in which the student is the initiator and prime mover who chooses a learning activity which is a task having practical applications, plans and develops the activity, conducts a trial operation, and evaluates its progress and outcome
the lecture	a discourse given before an audience or class, especially for instruction

INTRODUCTION

Educators have long recognized that students learn in different ways. For example, one student may learn most easily by listening to a lecture which includes general concepts, identifies several examples, and summarizes for overall clarity. Another student may need to actually put principles of medical record practice into operation by performing specific tasks, before concepts can be understood.

Some students appear to learn well if they work with a small group in which each member has an opportunity to compare her/his understanding with that of the peer group. On the other hand, some individuals may prefer to work along at their own pace, without having to consider and be diverted by the needs of others.

The amount of structure provided by a teacher in the medical record program may be important to the student. For example, some students may have a need for the teacher to establish well-defined goals, specify how and when they must be accomplished, and evaluate the student's outcome(s). Others may prefer to have an opportunity to establish their own goals or share in goal-setting, and to have an active role in identifying time schedules and evaluating their own performance.

Consideration of learners' needs is an important element in creating an effective learning environment, for then both the teacher's and the students' objectives can be met. Once a teacher is aware that a class of medical record students may prefer to learn in different ways, it may be helpful for that teacher to identify a variety of learning experiences which can accommodate the diverse needs of students and cover the necessary material.

Identification of specific learning strategies may be the product of the teacher's experience, intuition, and observation of individual students in the present medical program. In addition to the teacher's experience, a body of knowledge and experience, both general and specific to medical record science, offers suggestions about how students learn.

The ways a student likes to learn are generally called *student learning styles* or *student learning preferences*. Only learning preferences have been identified with medical record students and practitioners, and this chapter will concentrate on those preferences.

In relation to learning preferences and learning strategies which may be employed by the medical record educator, this chapter will:

1. define specific terms (Glossary);

2. identify principles and theories of learning;

3. suggest ways learning principles relate to medical record education;

4. relate findings of research about medical record students' and practitioners' learning preferences;

5. provide examples of learning strategies which may be used by teachers in medical record programs; and

6. identify resources (Bibliography) which may be used by teachers to conduct further review.

This chapter may be used by medical record educators as a resource to identify the importance of planned learning strategies. The individual teacher may use the examples given to illustrate lecture methods, computer-assisted instruction, independent learning packages, critical incident techniques, and student-structured learning projects. Or, a teacher may prefer to review the examples when developing her/his own strategies. When a class of medical record students is comprised of individuals with diverse learning preferences, variation is important. The examples must not be interpreted as mandates.

The medical record educator who wishes to know more about student learning preferences may use this chapter as a resourse. The annotated bibliography identifies authors who have conducted studies in this area, as well as theorists who espouse a variety of learning theories.

Research about learning styles and preferences in the health professions suggests that members of homogeneous groups (e.g., medical students and physicians, medical record students and medical record practitioners) do not demonstrate different learning styles or preferences when their levels of professional classification differ. (For example, the identified roles and functions of medical record personnel address both the MRT and the MRA level in each instance, indicating the similarity in structure which suggests homogeneity.) Therefore, this chapter deals with *all* medical record students as a homogeneous group, and does not differentiate between the MRT and the MRA programs.

HOW PEOPLE LEARN

IS KNOWLEDGE OF DATA AND FACTS ENOUGH?

Throughout elementary and secondary schooling, and possibly into the college years, we experience traditional *(pedagogic)* approaches to education, wherein the student is the recipient of data and facts imparted by a teacher. The teacher's responsibility is to decide what the students are to learn, how it will be learned, and on what information the student will be tested to illustrate that assigned data and facts were learned. The student's responsibility is to remember what has been taught, and to pass examinations.

The underlying principle of traditional learning is that there is a need for the feeding in of general, non-specific information which the student may or may not use "someday". The assumption is made that the student will subsequently be able to synthesize what he knows with what must be done, to accomplish behaviors appropriate to successful performance in daily life.

Traditionally, student response to pedagogic learning techniques has been the "cram session" just prior to exams, with varying degrees of amnesia immediately following completion of a course. The student also relies upon the assumption that when "someday" comes, s/he will be able to call forth whatever information is necessary (or at least will know where to look it up), and thus will perform appropriately.

This method has been likened, by at least one theorist, to the filling of an empty vessel. Anecdotally, pedagogy is sometimes called the teacher's response to the "empty vessel syndrome", whereby the empty heads of children are "opened" upon entry into their classroom, and contents of the "pitcher of knowledge" are poured in.

WHAT IS INVOLVED WHEN KNOWLEDGE MUST BE APPLIED?

When it becomes necessary for a learner to apply data and facts which have been taught to the work setting, the traditional approach is insufficient because knowledge alone may have little or no relationship to behavior. In the working world, skills must be demonstrated at a high level of competence; knowledge must be specific to a particular setting and circumstances. The student's attention must be directed to what is going on *now*, for "someday" has arrived and what was learned must relate to the application of skills as well as to the recall of data and facts.

Androgogic (adult) education approaches were initially formalized by the military during World War I, to teach officer candidates the skills necessary for performance in the field. Techniques were subsequently enlarged upon by industry, and ultimately found their way into the health care sector where principles of adult education have been adapted successfully to suit specific and unique learning needs.

Adult education addresses not only the pertinent facts and skills which must be learned, but also the social, psychological, and educational motivations of the learner. Such programs address the student's current and changing educational needs, rather than historical and/or general facts for which the student may have little practical use. Emphasis is upon performance of skills particular to the work place. Responsibilities of teacher and learner are conjoined. The teacher must be aware of the student's learning needs, and the student must be aware of the teacher's learning plans. A reciprocity emerges from their mutual need to exchange ideas and their agreement upon predetermined outcomes.

In relation to adult education, McKeachie (1978) says, *"Students are adults .....One of the severest criticisms that can be leveled against American higher education is that it perpetuates adolescence for another four years. It seems clear that adult behavior is* learned. *If no opportunity to practice adult behavior is allowed, such behavior will not be learned."*

The continuing education setting is also conducive to application of adult education principles and practices. Learners are professionals in the work force, who need to update existing knowledge and skills, and to learn new ones as they are developed. The working adult has a primary need to learn "how to", with whatever background information is necessary to demonstrate competence on the job. The concept of identifying learners' needs and designing a learning experience which will meet those needs, is very important in continuing education, where maximum learning must take place in a minimum of time.

The principles, research, and strategies addressed in this chapter are specific to approaches to learning which identify student learning needs as the primary focus for professional preparation of medical record practitioners. Knowledge and skills which must be exhibited by a graduate of a medical record program are specific to a profession and to particular work environments having unique performance needs. Employers place their greatest emphasis upon competence, and individual success is related to behavior rather than to knowledge alone. Medical record education needs an adult education approach, because that approach addresses all of these factors.

PRINCIPLES OF LEARNING

Seven principles of learning which are consistently applicable to health professionals are identified by Foley and Smilansky (1980). These were derived from a variety of behavioral, cognitive, and personality theories of learning, and can be adapted to any teaching situation.

STUDENT MOTIVATION

Three of the seven principles of learning address motivation to learn. External influences which stimulate the student's motivation to learn can be positive, negative, or neutral, and are directly related to individual outcomes because of responses which are triggered by stimulation or frustration.

LEARNING PRINCIPLE 1

Overall, students should have learning experiences which are positive and satisfying rather than negative and frustrating.

A generally positive experience is likely to influence the level of motivation exhibited by students, and perhaps their desire for future learning.

Maslow (1976) claims that human motivation to learn can be dealt with at five levels, based on a heirarchy of learning needs. The most fundamental needs must be satisfied to some degree, before the next level of needs can be addressed.

Learning involves the whole person. What a person already knows, feels the need to know, and how s/he feels about learning it, are important. Even more important is the self-image upon which the individual's values are based. If what is to be learned (and how) fits into that value system, the person is motivated to learn more readily. If the value system is in conflict with what is to be learned, the individual will resist learning what is inconsistent with or threatening to her/his personality structure. Teaching taps values relevant to what is to be learned, and makes the learning consistent with the learner as a person.

EXAMPLE 1 Consider your own experiences with learning. What was it that made you, as a student, "turn on" or "turn off" with a particular teacher? What alternative approach might the turned-off teacher have employed, to generate interest and willing participation on your part? What does this tell you about your own teaching?

If students have had a positive and realistic educational experience, they should have developed the capacity to cope with daily problems in the field and, hopefully, internalized the pleasures inherent in practicing.

LEARNING PRINCIPLE 2

The student should be provided opportunities for understanding the logic underlying teaching activities.

Students need to understand what they are expected to learn, the relevance of what they learn to their professional lives, and how the sequence of planned activities will enable them to learn the materials and/or skills.

Similarly, McKeachie (1978) espouses "*....a democratic philosophy....that education is a cooperative enterprise that works best when the student is allowed to contribute to it--when teachers listen and respond.*"

Learning takes place best when the student:

- a. is comfortable discussing and suggesting course objectives and standards;
- b. knows how the material will be used in clinical practice;
- c. takes part in deciding how material will be learned (method), and
- d. helps to conduct evaluations of her/his own performance.

This kind of involvement increases the student's receptivity, and therefore stimulates motivation to learn. It also helps the student understand the process s/he is going through, and why, and thus encourages more intelligent and effective student participation.

EXAMPLE 2 Medical record students are required to learn health statistics, and often have problems with this subject. They may question its relevance, or continually agonize over the need to memorize formulas. These concerns could be reduced if the goals are discussed and a teacher ties the formulas in with the effect particular statistics have upon facility operation (as well as to reports which must be completed). Also, it is essential that medical record students understand evaluation methods. At the beginning of the course, students need information about the nature of examinations, criteria and process for grading, and opportunities to improve performance. (Are examinations to be graded on ability to cite a formula, or on competence in performing the computations? Will a make-up exam be permitted?)

Early discussion and clarification of the above concerns alerts students to what the teacher considers essential, reduces their anxiety, and helps to minimize potential discontent. Although a learning environment may be highly structured and content-oriented, or a flexible clinical experience, students need to understand what is going on and why.

LEARNING PRINCIPLE 3

The student should have the opportunity to learn through a variety of educational resources.

A course cannot be planned to include every type of learning experience. However, providing as many resources as possible increases the likelihood of students assimilating the required knowledge and skills, and creates a more interesting and exciting learning experience via choice of several options.

Dewey and Bentley (1976) theorize that learning takes place through transactions in which the instructor, the content, and the learner are all components in the learning event and each contributes to it, thus making that learning event a unique transaction. (This is called the transactional learning theory.)

Research has shown that the lecture is more useful for conveying information and is less productive for teaching problem-solving. Small group discussions promote more problem-solving but are less appropriate for skills development than are structured practice sessions. While, conceptually, the merits of a given method can be matched to specific educational objectives, the real world of teaching is not so cut-and-dried. Individual differences are inherent, and some students need to review written material slowly and repeatedly, while others may be less concerned with details and can gain needed information through study groups just before final examination. Some students need to discuss theory before they can learn a new skill, while others learn best by immediate hands-on experience. Some learners get the most from reading materials, while others may retain more from a lecture. A teacher who is aware of these variances is more able to provide a variety of methods and materials for learning.

EXAMPLE 3a Medical record students who must learn coding of problems, diagnoses and operations using ICD-9-CM, may exhibit a variety of preferred ways to learn. Some may need to learn the classifications, characteristics, and conventions of ICD-9-CM before they can proceed to coding exercises. Other students may not be able to understand what these preliminary activities are all about, but succeed remarkably by going directly to the coding exercises and referring to the characteristics and conventions when they are encountered.

Within any broad goal for student learning, there is often a mixture of educational expectations that calls for a blend of teaching methods. In such instances, the teacher may call on several strategies to assure that students can both understand and apply the knowledge gained.

EXAMPLE 3b When medical record students learn about terminal digit filing, the principle is easily explained via the lecture method or a reading assignment. However, in order to truly understand how a terminal digit file is organized and maintained, most students need to see such a filing system and have an opportunity to complete filing and retrieving exercises.

In Example 3a, students may be offered a choice of learning activities. In Example 3b, however, the teacher's experience may dictate that specific steps be employed sequentially. In either case, going back to Principle #2, teacher and students need an opportunity at the beginning of the course to clarify what activities are to be conducted.

The vital element in accommodating each others' needs is the ability of students and teacher to lay the groundwork. Then, a productive, mutually beneficial learning environment may be possible. The first step in such a process may well be the identification of student learning preferences, for the ways a student prefers to learn represent a primary motivation for learning.

LEARNING PREFERENCES

Learning preference is defined as the choice of one learning situation over another. The method used to identify learning preferences of medical record students and practitioners was developed by Rezler (1975, 1980), reflecting both cognitive and affective aspects of learning preference, and included the following dimensions of preference:

ABSTRACT	Preference for learning theories and generating hypotheses, with focus on general principles and concepts.
CONCRETE	Preference for learning tangible, specific, practical tasks, with focus on skills.
INDIVIDUAL	Preference for learning or working alone, with emphasis on self-reliance and tasks that are solitary, such as reading.
INTER-PERSONAL	Preference for learning or working with others, with emphasis on harmonious relations between students and teacher, and among students.
STUDENT-STRUCTURED	Preference for learning via student-organized tasks, with emphasis on autonomy and self-direction.
TEACHER-STRUCTURED	Preference for learning in a well-organized, teacher-directed class, with expectations, assignments, and goals clearly defined.

The original study (Rezler & French, 1975) included medical record administration students. All students were female and had completed three years of college prior to entering their professional program. Mean scores for the concrete and teacher-structured dimensions were generally higher than for the remainder of the dimensions, and faculty commented that these results corresponded with their observations of how most of their students preferred to learn, i.e., they wished to be given explicit directions with assignments and goals made clear, and wanted to address specific, practical tasks.

There was, however, substantial variation, which suggested that some individuals may prefer learning situations that do not suit the majority of their classmates. The authors suggested that, because students in such programs make a transition from a large, impersonal class structure to a more individualized instructional environment when they entered the professional phase of their education, a preference for teacher-structured learning may be as much habit as preference.

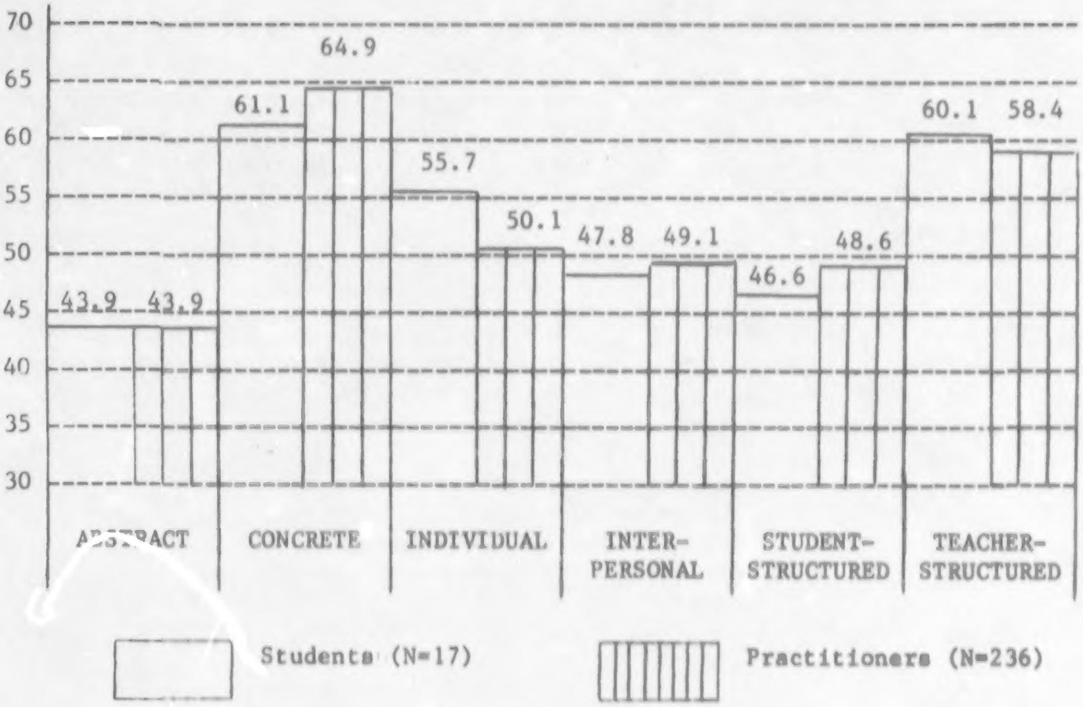
The Rezler method was used to identify learning preferences among medical record practitioners and compare them with results of the original study which included medical record administration students (Horton, 1979). Additional variables which were investigated included (1) location (part of the U.S.) where practitioners were asked to participate, (2) level of professional classification (RRA or ART), (3) years in practice, and (4) number of hours per week spent teaching.

Again, findings indicated significant preferences for concrete, teacher-structured learning. No significant relationship was found between preferences and level of professional classification. While there was significant variance in learning preferences according to number of years in practice, basic preferences remained consistently the same (mean scores were just higher or lower) and there was a strong suggestion that learning preference precedes choice of profession. The author suggested that the observed variances may indicate a flexibility in the practitioner which, while not actually reflecting a change in basic preferences, permits an individual to accommodate current needs as trends in medical record practice emerge. Practitioners were asked to indicate whether they felt their individual learning preferences, as demonstrated by their scores, accurately portrayed the ways they preferred to learn; 87.7% indicated agreement with their scores.

The following graph illustrates the similarities between mean scores of learning preferences among medical record administration students and medical record practitioners. Minimum possible score was 15; maximum possible score was 90.

LEARNING PREFERENCES:

Medical Record Students and Practitioners



Personal interests and personality factors are considered significant elements in career selection and eventual job satisfaction. A research report completed as a grant-in-aid project under the auspices of the AMRA Research Council addressed these elements (Eichenwald, 1981). The profile of the medical record administrator, identified in that study, describes that individual as one who:

> *"....prefers well ordered environments and likes systematic verbal and numerical activities; is usually conforming and prefers subordinate roles; is effective at well-structured tasks, but avoids ambiguous situations and problems involving interpersonal relationships or physical skills; describes him/herself as conscientious, efficient, calm, orderly and practical; identifies with power; and values material possessions and status."*

The same study identifies the medical record administration student as one who demonstrates preferences very similar to those of the practitioner.

The interest profiles and the identified learning preferences of medical record students and practitioners show striking similarities:

1. preference for structure in the working setting, and for learning activities which are teacher-structured;

2. preference for systematic verbal and numerical activities in the work setting, and for concrete learning experiences; and

3. avoidance of interpersonal relationships in the work setting, which is comparable to lack of preference for interpersonal learning situations.

Since learning preferences may be considered one facet of personality, it isn't surprising that similarities are demonstrated in results of two different types of research involving medical record students and practitioners.

Motivational influences such as learning and work preferences must contribute to student responses in the learning environment, if they are as closely aligned as research seems to indicate. While mean scores may indicate that a majority of students and practitioners prefer concrete, teacher-structured learning, significant numbers of medical record personnel exhibit preferences which differ from those of the majority. This reinforces the concept of providing a variety of learning experiences.

METHODOLOGY

The four remaining principles of learning address methodologies which a medical record educator may employ. Planning, developing, conducting, and evaluating student learning experiences in accordance with these principles will reinforce the instructor's efforts to stimulate learners' motivations, and provide a logical continuum in the adult education process.

LEARNING PRINCIPLE 4

The student should be provided with opportunities to be an active rather than a passive learner.

Learning takes place because the learner is actively involved with the teacher and/or other learners, as well as with the material to be learned.

The importance of active student involvement was substantiated by the authors' experiences with health professions faculty, who were asked to describe memorable learning experiences from their own professional training, early education, or any other learning situation which was of value. Each time this exercise was conducted, the significant and most frequently cited factor that made the experience memorable was the learner's own involvement.

EXAMPLE 4 Review your own learning experiences while in a medical record program, during your early education, or any other learning situation which was of value to you. What made learning memorable for you?

The active involvement of the student, as a general principle, must allow for exceptions, such as a withdrawn student who might feel threatened by an early involvement.

LEARNING PRINCIPLE 5

The student should be provided with models which serve as criteria for the expected performance

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The primary goal in educating health professionals is that they be able to competently perform on-the-job skills. Seeing the task executed correctly is essential during the learning process.

Knowles (1970) suggests that people learn by doing, by replicating what they have seen others do, and by repeating the activity until proficient.

Regardless of methods, students often need a visual image of the expected behavior or product. Reading, lectures, and group discussions are useful when learning the steps and vocabulary required for performance, but these cannot replace direct demonstrations. An effective demonstration will provide students with a complete model of the processes or procedures as performed in the natural setting, and an opportunity to critically examine these components. Watching the instructor, practitioners in the field, a film, a videotape, or a simulated model are ways of providing this type of experience.

EXAMPLE 5 In managing a medical record department, the practitioner in the field often coordinates the activities of the Medical Record Committee. The student, during directed practice, could have an opportunity to observe these activities as performed by a professional in the field. The next step in the learning process might require the student to perform these activities under the supervision of the practitioner.

"Knowing how" is seldom an appropriate criterion for performance in the field. Students need to have concrete and systematic opportunities to observe models in operation and study the behaviors that constitute their effectiveness. "Can do" is the preferred criterion of performance.

The exception to Learning Principle 5, is the independent activity undertaken by a learner as a student-structured project. In this case, models are researched during the planning stage, and the instructor provides guidance during the project to assure that the learner remains "on track". Even in such activities, the student often has an opportunity to observe someone else perform a similar activity.

LEARNING PRINCIPLE 6

Until the expected level of competence is attained, students should have adequate opportunities to practice using the knowledge and skills they have learned and receive feedback on their performance.

No matter how specific the goal statement (Principle 2), or how effective the models (Principle 5), opportunities must exist for students to perform expected behaviors.

The Skinner (1968) theory of operant conditioning suggests that learning has taken place only when the learner produces the "desired" behavior and it is then positively reinforced on a continuing basis.

Having the necessary knowledge and observing the best clinicians in the field does not guarantee competence, since students need practice, supervision, and feedback to determine the adequacy of their performance. Expert evaluation should be available as a point of comparison with students' own judgements. They also need opportunities to correct deficiencies until the level of mastery specified in the original criterion is reached.

EXAMPLE 6 Continuing with Example 5, the reinforcing and final steps for the student learning to coordinate activities of the Medical Record Committee might be the independent performance of the activities, followed by her/his own evaluation of performance. Evaluation and feedback from the practitioner and/or instructor would then be compared with the student's self-evaluation, to establish deficiencies which need to be corrected. If there is no opportunity to perform the exercise again, the student might be assigned to develop a written description of how s/he would correct the deficiencies.

In general, if supervision and feedback are evaluative and not judgmental in nature, they can be used to assist students to become competent practitioners.

Asking the student to do her/his self-evaluation first, provides the instructor with insights regarding the learner's understanding and confidence.

LEARNING PRINCIPLE 7

Students should be provided with opportunities to examine ways of adapting learned knowledge and skills based upon the characteristics of a given situation.

The steps involved in performing a skill may be influenced by a variety of behaviors. It is important to teach basic knowledge and skills, but students also must be able to adapt this learning to fit a variety of situations.

The experiential/situation theory of learning (Knowles, 1970) suggests that learning takes place through experience in related situations. The learner is placed in the situation which is to be handled, so as to provide the needed experience. The student can be helped to interpret and focus elements of that experience on what is called for by the learning activities or situational criteria. By knowing basic principles of practice in a given situation, the student must be able to demonstrate that variation of the situation can be handled differently without compromising the principles.

EXAMPLE 7 When teaching legal aspects of medical records, an instructor might develop a variety of situations addressing subpoenas, such as, a subpoena which is invalid, an improperly served subpoena, what must be done to respond to a subpoena which is valid or invalid, how to act on the witness stand, etc.

The significance of varying the characteristics of a situation depends upon the skill to be learned and how much time is available. If students have only one opportunity to practice a skill, it is possible to have individual students work with various types of situations. Individual experiences can then be discussed collectively as a basis for generalizing.

SUMMARY

With these seven principles of learning, the authors (Foley and Smilansky, 1980) condense numerous ideas put forth by different learning theorists. The order in which the principles are described reflects a logic to be considered when planning instructional strategies; however, the principles are intended as a guide rather than a comprehensive review of all learning principles.

An extremely useful sequence for planning instruction and evaluating outcomes is:

1. create the conceptual framework (Principles 1, 2 and 3);
2. offer models of effective performance and variety of resources (Principles 3 and 5);
3. provide opportunities for hands-on experience (Principles 4 and 6); and
4. give supervision and feedback (Principle7).

STRATEGIES

The strategies identified hereafter are designed to assist the medical record educator with development in a variety of ways, so that their efforts can address the learning needs of their students. The instructor may choose to utilize the examples provided, or may choose to refer to the example strategies while developing her/his own. In either event, the examples provided must not be interpreted as mandates.

USE OF LEARNING PREFERENCE PROFILES

What are the implications derived from research about learning preferences of medical record students and practitioners? What can teachers in medical record programs do about the students whose learning preferences are similar to the profiles identified for the profession? What can be done to help students whose preferences differ from the majority? Finally, how can medical record educators identify the learning preferences of their students?

The medical record educator who wishes to undertake identification of student learning preferences may use bibliographic references to contact the authors of instruments designed for that purpose. Choice of an instrument rests with the teacher and/or institution, as none is specifically recommended by the American Medical Record Association. A special section of the Bibliography identifies existing instruments for identification of learning styles and learning preferences, and the learning dimensions for each.

Use of such instruments can benefit instructors who need to identify proper approaches to the teaching/learning interactions which may be encountered with a class of diverse learning types. Like patient care planning, the concept of "student care planning" addresses three elements where learning preferences are concerned:

DIAGNOSTIC PLAN

Diagnosing learning preferences when students enter a medical record program could assist the teacher with planning a variety of learning experiences which would benefit most, if not all, medical record students.

THERAPEUTIC PLAN

Therapeutic use of such information might include advising students regarding what is ahead for them in terms of matching their preferences with the teaching style of the instructor, and with their chosen field, with suggestions for ways their preferences can be advantageous to themselves and their profession.

EDUCATIONAL PLAN

Educational use of the student's learning preference scores could help the individual understand how s/he fits into the scheme of things, and perhaps would provide needed insights for adjustments to necessary functions or identification of facets of future career goals. Education regarding learning preferences might also enable the student to accept assistance (or ask for it) more readily, if s/he better understood that "different" is not necessarily "wrong".

The student whose preferences are clearly abstract might be appropriately challenged to direct her/his talents to development and research within the profession. The future practitioner whose abstract, independent preference seems to make her/him a "mismatch " may find there is a place in the medical record profession for theorists.

In a profession where by the nature of the work involved, most people must concentrate on "how to", a preference for working with new ideas and concepts could place an individual in a position of leadership in the changing world of health care. Perhaps this individual needs to devote his/her efforts to areas of curriculum development, quality control, and interdisciplinary communications, to broaden the understanding of others regarding the intricacies of medical record practice. Creative talent can be used to address broad issues more conducive to the theoretical approach.

How about the "mismatch" between teacher and student? A companion study (Horton, 1979) attempted to identify similarities between learning and teaching preferences among medical record professionals. Results illustrated that medical record professionals do tend to teach the way they learn best, but the question of flexibility in teaching methods has yet to be studied.

It is obvious that, when there is a teacher/student "mismatch", each will find it necessary, though perhaps difficult, to adjust to the needs of the other. Understanding this need begins with the identification of those differences, and the willingness to discuss pertinent issues.

LEARNING MODES

A variety of learning modes were identified as being, perhaps, not commonly used in medical record education. Focus on strategies addresses those learning modes:

APPENDIX 5-1	computer-assisted learning
APPENDIX 5-2	self-instructional using prepared packages
APPENDIX 5-3	critical incident techniques
APPENDIX 5-4	student-structured learning

Commonly used learning modes are addressed briefly, to assist the medical record educator who would like to improve techniques, and the professional who is new to medical record education:

APPENDIX 5-5	the lecture
APPENDIX 5-6	small group learning

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Instructional packages used for the conduct of lecture skills workshops.

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A "how to" description of teaching methods and ways instructors may evaluate their effectiveness in utilizing those methods.

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Green, E.J. *The Learning Process and Programmed Instruction*. New York: Holt, Rinehart & Winston, 1962.

Application of the learning process in developing programmed instruction materials.

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Research conducted to identify learning and teaching preferences among medical practitioners, using instruments with comparable dimensions.

Huntington, J.F. *Microcomputers and Computer-Assisted Instruction*. Englewood Cliffs, NJ: Educational Technology Publications, 1979.

A description of the TRS-80's use in computer-assisted instruction.

Jacobs, A., et al. *Critical Requirements for Safe/Effective Nursing Practice*. Kansas City, MO: American Nurses' Association, Council of State Boards of Nursing, 1978.

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Rezler, A., and Rezmovic, V. "The Learning Preference Inventory." Journal of Allied Health 10 (February 1980): 28-34.

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Theory of operant conditioning, suggesting that learning has taken place only when the learner produces the "desired" behavior and is then positively reinforced on a continuing basis.

Von Haden, H., and King, J. Educational Innovators Guide. Charles A. Jones Publishing Co., 1974.

Definition, significant components, advantages, criticisms, and difficulties to be anticipated in individualized learning.

Wagner, R.H., and Arnold, C.C. Handbook of Group Discussion. 2d ed. Boston: Houghton Mifflin Company, 1965.

Discussion of methods for employing group discussion techniques, designed as a "how to" manual.

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Self-instructional package designed for use in a medical record department.

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A text for use in medical record educational programs.

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DIMENSIONS: Conditions (affiliation, structure, achievement, eminence); Content (number, quality, objects, people); Mode (listening, reading, visual aids, direct experience).

Dunn, R.; Dunn, K.; and Price, G. "Summary of Research on Learning Style Based on the Learning Style Inventory." Paper read at the annual meeting of the American Education Research Association, New York, 1977.

DIMENSIONS: Sound, light, temperature, design, self-motivated, adult-motivated, teacher-motivated, unmotivated, persistent/not persistent, responsible/not responsible, structure, prefers learning through several ways, has auditory preferences, has visual preferences, has tactile and kinesthetic preferences, food, functions best in morning, functions best in late morning, functions best in afternoon, functions best in evening, mobility.

Friedman, C., and Stritter, F. "An Empirical Inventory Comparing Instructional Preferences of Medical and Other Professional Students." RIME Proceedings, 1976.

DIMENSIONS: Pacing, influence, media, active role, feedback.

Grasha, A., and Riechmann, S. "A Rational Approach to Developing and Assessing the Construct Validity of a Student Learning Style Scales Instrument." *Journal of Psychology* 87 (1974).

DIMENSIONS: Competitive - collaborative; avoidant - participant; dependent - independent.

Gregorc, A.F. "Learning/Teaching Styles: Their Nature and Effects." In *Student Learning Styles: Diagnosing and Prescribing Programs*. Reston, VA: National Association of Secondary School Principals, 1979.

DIMENSIONS: Concrete sequential, concrete random, abstract sequential, abstract random.

Kolb, D. "Learning and Problem Solving." In *Organizational Psychology: A Book of Readings*, edited by D. Kolb, I. Rubin, and J. McIntyre. Englewood Cliffs, NJ: Prentice-Hall, 1974.

DIMENSIONS: Concrete experience (feeling), reflective observation (watching), abstract conceptualization (thinking), active experimentation (doing).

Papalia, A. "Assessing Students' Learning Styles and Teaching for Individual Differences." *Hispania* (May 1978).

DIMENSIONS: Cognitive styles, sensory modes, interactive learning modes, work habits, personal characteristics, intellectual dependency, intellectual independency, and originality.

Renzulli, J., and Smith, L. *Learning Styles Inventory: A Measure of Student Preference for Instructional Techniques*. Mansfield Center, CT: Creative Learning Press, 1978.

DIMENSIONS: Projects, drill and recitation, peer teaching, discussion, teaching games, independent study, programmed instruction, lecture, simulation.

Rezler, A., and French, R. "Personality Types and Learning Preferences of Students in Six Allied Health Professions." *Journal of Allied Health* 4 (Winter 1975): 20-26.

DIMENSIONS: Abstract, concrete, individual, interpersonal, student-structured, teacher-structured.

Schmeck, R., and Ribich, F. "Construct Validation of the Inventory of Learning Processes." *Appl. Psychol. Meas*. 2 (1978).

DIMENSIONS: Synthesis - analysis, study methods, fact retention, elaborative processing.

Tamir, P., et al. "Development and Exploratory Trials of a Cognitive Preference Inventory for Medical Students." *Medical Education* 13 (1979).

DIMENSIONS: Recall, principles, questioning, application.

APPENDIX 5-1

COMPUTER-ASSISTED INSTRUCTION

DEFINITION: "Computer-assisted instruction (CAI) refers to teaching and learning which occur as interactions between teachers, students, course materials, methods and the computer (Huntington, 1979)."

INTRODUCTION:

As time has passed in the electronic data processing field, educators have found the computer to be an excellent tool for individualized learning activities. Costs for computer hardware continue to decrease, making this learning tool more accessible to the medical record student. However, the soft-ware for medical record applications continues to be scarce, limited, and expensive. This is one area in which medical record professionals need to become involved.

The primary aim of CAI is to optimize the learning process. Therefore, the medical record educator must remember that:

a. the learning increment must be kept small to insure success,

b. reinforcement must be given every time a correct behavior occurs,

c. the material must progress from simple to complex concepts, and

d. a set of discriminators must be built into the learning module to ensure learning, rather than allowing the student to progress due to the high probability that s/he will choose correctly (Huntington, 1979).

The computer can be viewed as an instructor, or as a laboratory (Northwest Regional Education Laboratory, 1978).

COMPUTER AS INSTRUCTOR

As an instructor, the computer may provide drill and practice, or tutorial lessons for the student

Drill and practice supplement the material taught by the teacher. It may either complete a lecture, or add to it. Individualized learning is accomplished through review of each student's performance record. The next appropriate lesson is then selected for the student based on his previous performance. The level of difficulty then becomes individualized for that student.

Drill and practice applications: medical record applications of the CAI drill and practice learning method would be in the areas of statistics, processing, classification, and indexing. Theory may be presented with lecture, and exercises through the computer.

As a tutor the computer provides the student with a "private teacher" which presents a concept and continues to develop skill in its use. The detailed branching structure available through the computer allows immediate decisions to be made, either after the student's last response, or after some portion of his total response history is examined, on what material is to be presented next.

Tutorial applications: medical record applications of the CAI tutorial learning method would be in areas such as the collection and processing of statistics, classification and indexing, or the historical review of medical record science and of medicine.

COMPUTER AS LABORATORY

As a laboratory, the computer may be used in data analysis, problem-solving, or simulations and games.

Through data analysis applications, the student learns to collect, analyze, and evaluate data. This allows interpretation of the data, rather than strict computational exercises.

Data analysis applications: medical record applications of the CAI data analysis learning method would be in areas such as quality assurance and the analysis of health statistics.

The computer as a problem-solving laboratory allows the student to solve complex problems. Data needed to solve the problem is requested by the computer and entered by the student. The computer then offers options for problem resolution. Problem-solving *skills* may also be learned with the aid of the computer. A scenario is given and the computer proceeds to guide the student into writing the problem-solving program, the original focus of which is probably simple. More complex skill is needed as the exercise continues.

Problem-solving applications: medical record applications of the CAI problem-solving method would be in areas such as recommending the need for new equipment after defining constraints; rearranging the workflow after identifying gaps and overlaps; or monitoring the filing and maintenance of active and inactive primary records (purging).

The computer used in simulations and games has many applications. In simulations, reality is simplified so that the student can better understand it. Competition among students, where success depends upon skill, motivates the players in games. Simulations and games allow the student to:

a. discover cause-and-effect relationships,

b. develop and try out strategies, and

c. learn how a particular system operates.

Applications for simulations and games: medical record applications of the CAI simulations and games learning methods would be in areas such as:

a. applying existing departmental policies,

b. following specific procedures to ensure that the confidentiality of health information is maintained,

c. counseling an employee regarding performance, promotion, or termination,

d. maintaining a locator file and sign-out system for incomplete records, and

e. following procedures for retrieving health information for a correspondence request.

CONCLUSIONS

Computer-assisted instruction allows the student to demonstrate mastery at the end of the unit (Learning Principle 4). Therefore, teaching units can be combined, or made smaller, saving the educator's time and reducing repetition in the classroom, while reinforcing concepts and tailoring learning to the student's needs and goals (Learning Principles 1, 3 and 5).

This high-feedback format is best for the active, student-structured, and individual-study-oriented student (Learning Principles 2, 6 and 7).

Due to the intensity of this instructional mode, 30 minutes per day at the computer terminal in a particular subject area may be all the student can use effectively.

AVAILABLE RESOURCES

To the best of our knowledge, CAI for medical record students is not widespread. However, the following three colleges will be happy to share their experience with other programs:

1. Ohio State University — Contact: Program Director
   1583 Perry Street
   Columbus, Ohio 43210

   Subject: Medical Terminology

2. State University of New York — Contact: Program Director
Agricultural & Technical College — (607) 871-6178
Alfred, New York 14802

Subjects: Anatomy & Physiology; Medical Terminology; Pathophysiology

3. Portland Community College — Contact: Program Director
12000 S.W. 49th Street — (503) 244-611, Ext. 494
Portland, Oregon 97219

Subject: Admitting Procedures (used to train admitting clerks, available through the Data Processing Department)

INDEPENDENT LEARNING

DEFINITION: Independent learning is defined here as student use of instructional packages in a self-sufficient way, to promote learning.

INTRODUCTION

Independent learning methods are effective teaching mechanisms when designed with a preference of the student in mind. The student who finds it difficult to concentrate in the traditional classroom may benefit from the individualized instructional package. This is the learner who prefers to work without close supervision at her/his own pace, and the visual learner, who can also utilize independent packages for a positive learning environment.

Clear, precise objectives must be set and agreed upon by the student and instructor. The instructional package is then molded to fit those objectives and aimed to correct the identified disabilities of the learner. An assessment is made to determine whether or not those objectives have been met.

Independent learning packages can be structured in a variety of ways, two of which are described here: Modules and programmed learning packages.

MODULES

Russell (1974) states that "*....a module is an instructional package dealing with a single conceptual unit of subject matter. It is an attempt to individualize learning by enabling the student to master one unit of content before moving to another.*"

Modular instruction packages have clearly stated objectives, encourage active participation by the learner, and utilize immediate reinforcements. A variety of media can be used:

1. printed materials
2. visual and projected materials
3. audio materials
4. tangible or real materials
5. direct human interaction

EXAMPLE #1

A specific responsibility stated in the AMRA "Roles and Functions of Medical Record Personnel" (Johnson & Cave, 1979) is to prepare administrative and clinical statistical reports. The action verb here is "prepare", which is application in nature and can be learned through modular instruction. One module which could be designed (Russell, 1974) for the instruction of health statistics might deal with census statistics. The census module would have seven components:

1. Statement of performance objectives

2. Individual module including:

   a. definitions
   b. reading assignment
   c. examples (either paper-and-pencil or slide-tape presentations)
   d. explanations of use of census figures to forecast health care planning
   e. problems to be solved utilizing patient admission cards, census forms and programmed workbooks to calculate in-patient days, average daily census, and percentage of occupancy.

3. Written test on the module material, with a standard minimum acceptable grade (e.g., the student may be required to answer __% of the questions correctly).

4. Help from a peer (optional: if the student did not achieve a minimum acceptable grade on the test, help could be requested from a student who satisfactorily completed the test. This helps both students, since the student needing help can get it immediately from a peer, and the student who tutors has her/his own learning reinforced).

Students may be offered an opportunity to earn bonus points. Components 5, 6, and 7 may be used to identify means of earning bonus points:

5. Prepare statistical presentations, in groups or as individuals, possibly involving graphs and forecasting. Up to 10 points could be awarded for the presentation.

6. A student may earn additional bonus points, one per module, by serving as a peer tutor.

7. Students who do not wish to choose options 5 or 6, may elect to take a higher level test.

VonHaden (1974) points out that individualized instruction will probably cost more than traditional instruction, but it can be started with judicious use of present personnel and other available resources and can be used repeatedly with modifications. Most medical record educators have used lectures, worksheets, and tests to teach health statistics. These teaching strategies could be substituted by modular instruction with the focus on learning and learner needs.

EXAMPLE #2

Modules can be used to achieve entry-level behavior. For example, a module can be designed to provide medical record students with a prerequisite competency of analyzing health records, which is necessary to develop the skill of monitoring the accuracy of quantitative analysis of health records.

Most medical record students learn to analyze health records early in their education. However, discussion on monitoring the accuracy of this analysis occurs later in the curriculum. At that point, some students might be very proficient in analyzing due to job experience; others might have decreased competency because they were not required to use this acquired skill.

An instructional module on analyzing health records eliminates the need to devote class time for review. The students could be asked to review the material in the module on their own. Those who feel they are "rusty" and could review the modular material prior to class discussion might welcome this opportunity.

LEARNING PRINCIPLES

The learning principles addressed by these two examples include:

1. *Overall, students should have learning experiences which are positive and satisfying rather than negative and frustrating.*

2. *The student should have the opportunity to learn through a variety of educational resources.*

3. *The student should be provided with opportunities to be an active rather than a passive learner.*

4. *The student should be provided with models which serve as criteria for the expected performance.*

5. *Until the expected level of competence is attained, the student should have adequate opportunities to practice using the knowledge and skills learned, and receive feedback on their performance.*

PROGRAMMED INSTRUCTION

Self-instructional packages often contain learning programs. "Programmed instruction (PI) may be defined as a planned sequence of experiences, leading to proficiency" (Espich, 1967). Only one item is presented at one time, introduced through a simple written statement. The student is required to be an active rather than a passive learner *(Principle #4)*, and must respond to a question presented before going on to the next frame.

The learner is immediately informed of the correctness of each response *(Principle #6)*, and must master each concept before going on to the next phase. Material is presented gradually, beginning with easy material and progressing to the more difficult.

There are three types of programmed instruction designs: constructed response frame sequence, intrinsic programming, and adjunct programming.

CONSTRUCTED RESPONSE FRAME SEQUENCE

The constructed response frame sequence is a type of linear programming. It is a statement with a blank space for a response, and provides for no other choices. The answer shows immediately below the question. It is comprised of the set frame which includes the data portion, the practice frame which allows for responses, and the terminal frame which allows for summary.

The detail of a quantitative analysis exercise could be handled in this manner. A statement of a regulatory agency requirement could begin as a set frame. Practice frames could include questions concerning correct items required for the record. The terminal frame could summarize the exact items reviewed, such as requirements for clinical resumes (Example #3).

INTRINSIC PROGRAMMING

Intrinsic programming is another type of programmed learning. Branching is a technique of intrinsic programming that allows the faster learner to progress quickly, as well as prompts the slow learner with correcting logic.

Each frame that requires a response allows for a number of answers. If a student does not answer correctly, s/he goes to another series of questions designed to lead the student logically back to the correct answer, while explaning what was not quite right. If the student answers correctly, s/he goes on to the next topic.

Patricia Pierce, RRA, has written a text that uses this technique in her book, Commonly Computed Rates and Percentages (AMRA, 1976).

ADJUNCT PROGRAMMED LEARNING

There are two types of adjunct programmed learning. The first reiterates the subject matter in a text, after the student has utilized the text. The second extracts material verbatim from the text and molds response frames to the content. For example, with either method, the text Medical Records and Health Information by Kathleen A. Waters and Gretchen Frederick Murphy (Aspen, 1979) could be utilized as the source, and modules could be built to supplement the subject matter (Example #4). The same principles described above would apply here.

ADAPTATION OF PROGRAMMED LEARNING METHODS

Self-instructional packages can also be designed by the teacher using different content areas. For example, a package could be designed around terminal digit filing. The student could have a brief lecture by a film strip or the instructor, concerning "General Hospital's" method of terminal digit filing. The self-instructional package, using a programmed learning approach in part, can then be provided. Following completion of programmed learning, the student can also have practical experience placing real folders in terminal digit order. (See Example #5).

Students who studied Example #5 independently would use the same learning principles associated with the modular learning concept.

SUMMARY

Self-instructional packages have been shown to be very popular with medical record students. Packages are presently available and in present use, in the educational system and in the field. However, such packages are not cataloged and would most likely be available only on an informal basis.

Aside from the modules attached here, the Independent Study program of the American Medical Record Association provides excellent examples of independent learning packages which are used in a structured, more traditional educational framework. These modules are excellent resources for college and "correspondence" students alike.

EXAMPLE 3

A LINEAR PROGRAMMING MODULE

By Nancy Walker, RRA

FRAME 1. SET FRAME

THE JOINT COMMISSION ON ACCREDITATION OF HOSPITALS STATES THAT EVERY MEDICAL RECORD MUST HAVE A CLINICAL RESUME THAT INCLUDES FIVE MAJOR ITEMS.

FRAME 2. PRACTICE FRAME

THERE ARE ________________ ITEMS THAT SHOULD BE INCLUDED IN A CLINICAL RESUME.

ANSWER: FIVE.

(THIS MODULE CAN BE UTILIZED IN PART OR IN WHOLE IF THE AUTHOR IS CREDITED)

FRAME 3. SET FRAME

THE REASON FOR HOSPITALIZATION IS A REQUIRED TOPIC IN EVERY CLINICAL RESUME.

FRAME 4. PRACTICE FRAME

NAME ONE ITEM NECESSARY IN A CLINICAL RESUME.

______________________________.

ANSWER: REASON FOR HOSPITALIZATION

FRAME 5. SET FRAME

THE SIGNIFICANT FINDINGS SHOULD BE INCLUDED IN EACH CLINICAL RESUME TO DESCRIBE THE FINDINGS OF DIAGNOSTIC PROCEDURES AND DECISIONS.

FRAME 6. PRACTICE FRAME

EACH CLINICAL RESUME DESCRIBES THE FINDINGS OF DIAGNOSTIC PROCEDURES AND DECISIONS IN A SECTION CALLED THE ________________________.

ANSWER: SIGNIFICANT
FINDINGS

FRAME 7. SET FRAME

EACH CLINICAL RESUME SHOULD HAVE THE PROCEDURES PERFORMED, THE TREATMENT RENDERED, AND THE CONDITION OF THE PATIENT ON DISCHARGE.

FRAME 8. PRACTICE FRAME

WHEN REVIEWING A CLINICAL RESUME, YOU SHOULD FIND THE PROCEDURES PERFORMED, THE TREATMENT RENDERED AND ______________________.

ANSWER: THE CONDITION OF THE PATIENT ON DISCHARGE.

FRAME 9. TERMINAL FRAME

THE FIVE ITEMS THAT SHOULD BE FOUND IN A CLINICAL RESUME ARE:

1. THE REASON FOR HOSPITALIZATION
2. THE PROCEDURES PERFORMED
3. THE SIGNIFICANT FINDINGS
4. THE TREATMENT RENDERED
5. THE CONDITION OF THE PATIENT ON DISCHARGE

EXAMPLE 4

AN ADJUNCT PROGRAMMED LEARNING MODULE

By Nancy Walker, RRA

FRAME 1.

THIS PROGRAMMED LEARNING MODULE IS TO BE USED IN CONJUNCTION WITH MEDICAL RECORDS IN HEALTH INFORMATION BY KATHLEEN WATERS AND GRETCHEN FREDERICK MURPHY (Aspen Systems, 1979).

FILING SYSTEMS

PLEASE READ PAGES 455 TO 459 ON FILING SYSTEMS.

FRAME 2.

IN A ______________________________ SYSTEM OF FILING ALL INFORMATION IS FILED IN ONE LOCATION.

ANSWER: CENTRALIZED.

FRAME 3.

IN A ______________________________ SYSTEM OF FILING THE FILES ARE USUALLY LOCATED CLOSE TO THE SOURCE OF THEIR ACTIVE USE.

ANSWER: DECENTRALIZED.

(THIS MODULE CAN BE UTILIZED IN WHOLE OR IN PART IF THE AUTHOR IS CREDITED)

EXAMPLE 5

TERMINAL DIGIT FILING SELF INSTRUCTIONAL PACKAGE

By Nancy Walker, RRA

INTRODUCTION

This is a self instructional manual on terminal digit filing. It is a step-by-step method whereby all instructional and evaluative mechanisms are contained in this unit. Blanks are provided for learner's response in each frame. Answers appear in lower right hand corner after each frame. There is a short quiz in Attachment A with answers provided in Attachment B.

The objectives are:

that employees will:

1) differentiate between terminal digit filing and straight numeric filing

2) file correctly by the terminal digit filing system used at William Beaumont Hospital, Royal Oak, Michigan

In addition to the self teaching manual, there will be a demonstration and explanation of color coding and the actual files for ease in learning terminal digit filing.

00-09	Brown
10-19	Blue
20-29	Green
30-39	Orange
40-49	Purple
50-59	Light Purple
60-69	Dark Green
70-79	Yellow
80-89	Red
90-99	Blue (long stripe)

(THIS PACKAGE CAN BE UTILIZED IN WHOLE OR IN PART IF THE AUTHOR IS CREDITED)

DEFINITIONS

1. Terminal Digit Filing System is a simple, speedy, and accurate method of filing numbered records.

    A. Number arrangement.

    1. Numbers are arranged from right to left in groups of 2-2-2 or 2-2-3.

        Example: 12-34-56
        123-45-67

    B. Primary group of numbers.

    1. The primary numbers are the two digits to the extreme right.

        Example: 12-34-56
        123-45-67

    C. Secondary group of numbers.

    1. The secondary numbers are the two digits to the left of the primary numbers.

        Example: 12-34-56
        123-45-67

    D. Tertiary group of numbers.

    1. The tertiary numbers are the set of 2 or 3 numbers at the extreme left.

        Example: 12-34-56
        123-45-67

    E. Order of numbers.

    1. In terminal digit filing, one looks at the primary digits first, the secondary digits second, and tertiary digits last.

        Example: 12-34-56
        56 first or primary digits
        34 second or secondary digits
        12 third or tertiary digits

LEARNING FRAMES

1. These numbers are arranged in straight numerical order:

361203
375879
1018654
1234567
1483878

These numbers are arranged in straight numerical order. (True or false)

352143
430028
1121753
1112683
1234567

Answer: False

2. With terminal digit filing the number is looked at in groups from right to left. The last 2 digits (extreme right) are considered to be the first, or primary group.

45-32-12 - 12
37-03-75 - 75
123-45-67 - 67
131-52-84 - 84

Which digits are considered to be the primary group in these numbers?

39-12-25
44-73-48
111-03-32
125-75-45

Answer: 25
48
32
45

LEARNING FRAME (cont.)

3. The middle two digits are considered to be second or the secondary group in the terminal digit filing.

39-12-25 - 25 - 12
45-73-48 - 48 - 73
111-03-32 - 32 - 03
125-75-45 - 45 - 75

What are the primary and secondary groups in these numbers?

	Primary	Secondary
45-34-27	1)	2)
33-07-18	1)	2)
110-25-65	1)	2)
125-34-56	1)	2)

Answer: 1) 27 2) 34
1) 18 2) 07
1) 65 2) 25
1) 56 2) 34

4. The first 2 or 3 digits (extreme left are considered to be the third or tertiary group in terminal digit filing).

39-12-25 - 25 - 12 - 39
44-73-48 - 48 - 73 - 44
111-03-32 - 32 - 03 - 111
125-75-45 - 45 - 75 - 125

What is the tertiary group in these numbers?

22-75-83
32-04-18
121-81-40
142-07-30

Answer: 22
32
121
142

LEARNING FRAMES (cont.)

5. Thus in terminal digit filing, one looks at the last 2 digits (extreme right) first, the middle 2 digits second and the first 2 or 3 digits (extreme left) last. Terminal digit filing of these numbers 132-03-75, 25-75-23, 24-74-24, 143-30-72 would be:

25-75-23
24-74-24
143-30-72
132-03-75

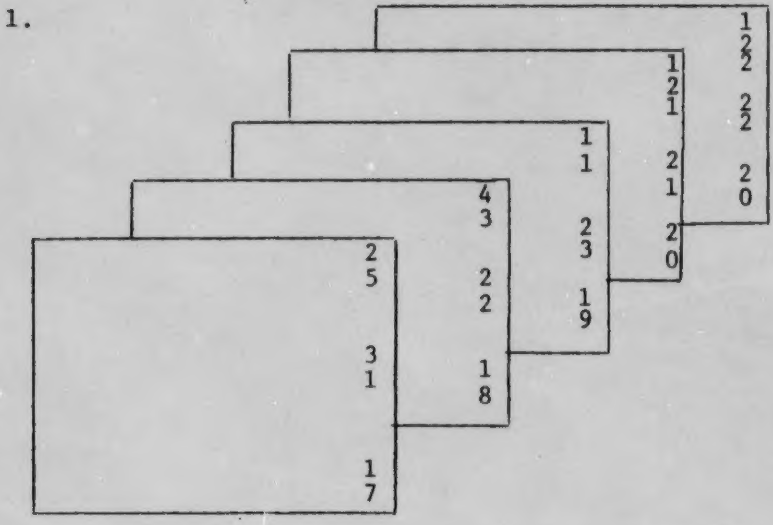
Arrange these numbers in terminal digit filing order: 110-23-45. 111-24-45, 23-24-27, 22-25-28, 132-43-29.

Answer: 23-24-27
22-25-28
132-43-29
110-23-45
111-24-45

ATTACHMENT A

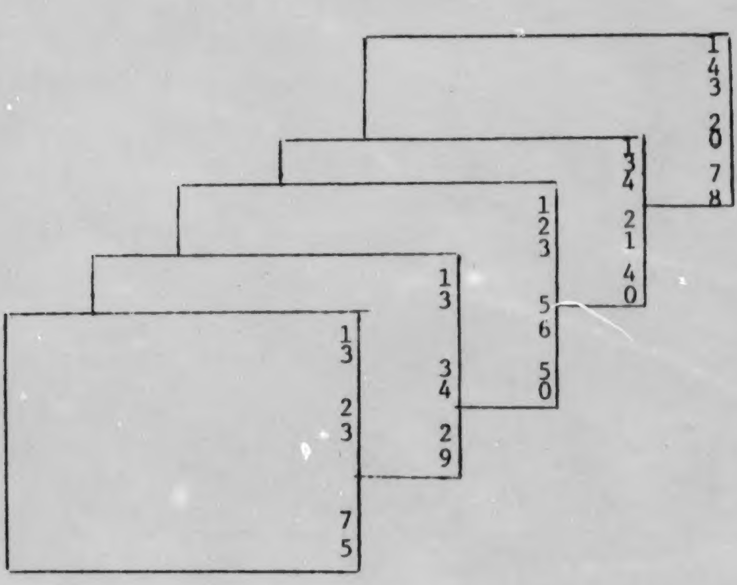
A SHORT QUIZ

1.


122 22 20
121 21 20
11 23 19
43 22 18
25 31 17

What type filing system is used here?

2.


143 20 78
134 21 40
123 56 50
13 34 29
13 23 75

ATTACHMENT A (cont.)

3. What are the primary, secondary, and tertiary filing groups in the following numbers?

	Primary	Secondary	Tertiary
121-75-35	1)	2)	3)
12-88-33	1)	2)	3)
143-76-45	1)	2)	3)
127-75-45	1)	2)	3)
11-87-33	1)	2)	3)
10-86-30	1)	2)	3)

4. Arrange the numbers in question 3 in terminal digit filing order.

1.

2.

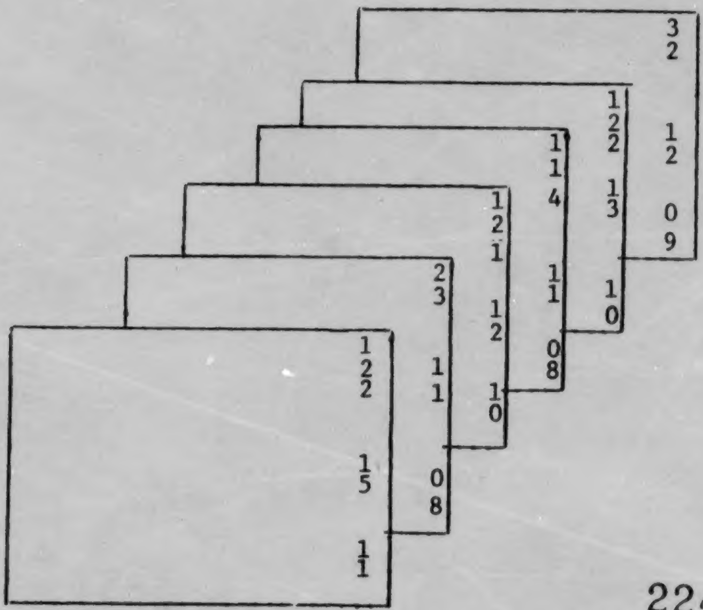
3.

4.

5.

6.

5. File these records in terminal digit filing order:



3 2 1 2 0 9
1 2 2 1 3 1 0
1 1 4 1 1 0 8
1 2 1 1 2 1 0
2 3 1 1 0 8
1 2 2 1 5 1 1

1.

2.

3.

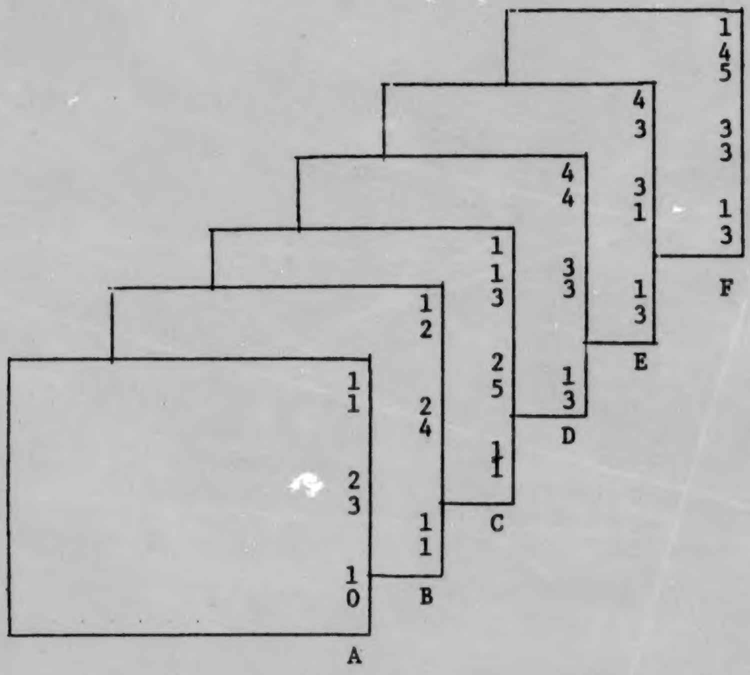
4.

5.

6.

ATTACHMENT A (cont.)

6. In terminal digit filing which record is misfiled?



1 1 2 3 1 0
A
1 2 2 4 1 1
B
1 1 3 2 5 1 1
C
4 4 3 3 1 3
D
4 3 3 1 1 3
E
1 4 5 3 3 1 3
F

ATTACHMENT B

SHORT QUIZ ANSWERS

1. Terminal digit

2. Straight numerical filing

3.

Primary	Secondary	Tertiary
45	75	121
33	88	12
45	76	143
45	75	127
33	87	11
30	86	10

4.
   1) 10-86-30
   2) 11-87-33
   3) 12-88-33
   4) 121-75-45
   5) 127-75-45
   6) 143-76-45

5.
   1) 23-11-08
   2) 114-11-08
   3) 32-12-09
   4) 121-12-10
   5) 122-13-10
   6) 122-15-11

6. 43-31-13 (E)

APPENDIX 5-3

CRITICAL INCIDENT TECHNIQUES

BACKGROUND: Critical incident techniques have been used in many health professions to define abilities that are essential to competent performance of health care practitioners (Fivars, 1976). The incidents are "critical" in that the activity reported makes a difference, either positively or negatively, to the outcome of the situation reported (Jacobs et al, 1978).

DEFINITIONS: Critical Incident Techniques in Medical Record Education

Critical incident is defined, in this context, as a problem occurrence or event characterized by risk or uncertainty.

Simulation in Medical Record Education

Simulation is defined, in this context, as a representation of some aspect of medical record practice which helps students better to understand, enjoy, predict, and/or control analagous situations in actual practice.

APPLICATION: Responses to simulated critical incidents drawn from professional experience will help to provide insights regarding the student's skills in dealing with administrative/ interpersonal issues.

INTRODUCTION:

Students have to learn how to deal with problem situations and to demonstrate skill in dealing with a variety of organizational, financial, and administrative crises.

Using critical incident techniques, structured situations can be developed which involve interaction with personnel at various levels in a simulated organizational setting. Variations might involve requiring students to describe management objectives, personnel issues, budget constraints, or floor plan (space) requirements for a medical record department.

A critical incident describes a setting, who was involved, what happened, what action was taken, and the solution. Students are asked to analyze the incident and identify: (1) was the action taken immediately effective, (2) was it ethical, (3) what alternatives must be considered, and (4) what the long-term result is likely to be.

IDENTIFYING CRITICAL INCIDENTS

Most medical record practitioners have experienced, at one time or another, situations in which interpersonal relations were uncertain or at risk. In each situation, some facet of management, and often some ethical code, must be addressed. The variations may be specifically different, but anecdotally we know that, across the United States, such crises are similar in the ways they arise.

The first responsibility of the instructor in developing critical incident learning strategies is to gather realistic data. This can be done by circulating a request among medical record practitioners (or former practitioners) with whom the instructor is acquainted. The request would be accompanied by a form:

> Think of a recent time when you observed a medical record practitioner in an emotionally stressful situation. Her response to the situation may have been positive or negative. Please describe the following:
>
> 1. What was the situation and who were present?
>
> ____
>
> ____
>
> ____
>
> 2. Why was the situation particularly stressful?
>
> ____
>
> ____
>
> ____
>
> 3. How did the medical record practitioner respond to the situation? What did she say or do?
>
> ____
>
> ____
>
> ____
>
> Please return to: (Instructor's name and address)

Returns from this form supply the data base for critical incidents to be used for development of learning strategies.

DEVELOPING THE INCIDENT NARRATIVE

Information supplied by the form circulated to practitioners is organized into a format which provides a situation students must analyze. The exercise itself can be made less threatening to students if some humor is introduced, such as identifying a physician as "Dr. Delinquent", or a director of a medical record department as "Ms. Go-Fer". The important thing is to supply fictitious names so characters are easily identifiable.

It may be desirable to use several similar incidents to develop one good narrative. This may be augmented by insertion of particular actions or conclusions the instructor wishes to stress. However, situation narratives must always relate to facts about an event, *never personalities*. The description must always include information about:

1. the setting in which the incident took place,
2. what happened,
3. who was involved, by name and title,
4. what action was taken by the medical record practitioner, and
5. the result of that action.

The next task which faces the instructor is identification of elements of the incident which students must thereafter identify and analyze. These may include the same items listed above, plus:

6. Was the action taken immediately effective?
7. Was the action taken ethical? Appropriate?
8. What alternative actions must be considered?
9. What is likely to be the long-term result?

Additional items may be required, such as, the type of activity which is addressed (personnel relations, medical staff relations, etc.); or, the appropriate actions of each participant; or, how the incident could have been avoided altogether.

USE FOR CLASS DISCUSSION

When used for class discussion, the instructor may choose to read the narrative and ask the questions of the students. An alternative might be to provide the narrative by handout and ask questions while students have the narrative before them for reference.

USE FOR HOMEWORK OR EXAMINATION

When critical incidents are used for homework or examination, the narrative and the questions must be provided in tandem, along with sufficient room and time for students to respond.

EXPECTED RESPONSES

Whether used for class discussion, homework, or examination, expected responses from students must be prepared in advance by the instructor. If the incident is used as a learning experience, discussion may digress when the instructor asks for possible variations in such a situation. If the incident is used for examination, the instructor must decide in advance how specific and/or complete a student's response will need to be, and establish a grade scale for each question, for the material and responses may be subjective and there must be very good reasons for grades which are awarded.

EXAMPLE STRATEGIES

The following narratives represent critical incidents which might be employed as learning strategies for medical record students. Pertinent points which must be considered when creating questions to be asked of students, and when reviewing their responses, are also identified.

MEDICAL STAFF RELATIONS

Mrs. Moore, Director of Medical Records at Upstanding Hospital, was told by the director of another department that Dr. Sneaky had been seen placing several medical records in the trunk of his car.

Knowing that Dr. Sneaky was chronically in arrears with completion of his patient's records, Mrs. Moore checked and discovered that six records assigned to him were missing. She approached Dr. Sneaky, telling him that record department employees could not locate the records, and he denied any knowledge of there whereabouts. Therefore, she asked him if he would please look in his briefcase, his office, etc., and let her know in a day or two if he had more success in finding the records than she had.

The next day, the records were found in the doctors' dictating room.

Points to consider when reveiwing this incident with students:

- Setting, incident, people involved, action taken, result.
- If the first action had been ineffective, what would be the next step?
- Is there likely to be any long-term result?
- Alternatives mandated by administrative policies.
- Alternative choices of action and their possible results.

For example, the physician should be the first person contacted. If that action is not effective, what should follow is notification to the appropriate medical staff representative (chief of service or chairman of the medical record committee). Business protocol and the AMRA Code of Ethics require this.

However, what can the medical record practitioner do if s/he is only permitted to report such things to the Administrator? Ethically, it is required that the *appropriate* authority be informed, but the Administrator in most hospitals has no authority over private physicians. (The important issue is that the appropriate medical staff representative be notified, and that the practitioner be sure he gets notified.)

What might the result be if the administrator is not very diplomatic in handling the incident? How could the medical record practitioner handle the results?

PERSONNEL RELATIONS

Two day-shift file clerks have been constantly sniping at one another in disagreement about how the heat and light in their mutual work area should be regulated. Mrs. Moore, Director of Medical Records, heard several comments within a few days after receiving a complaint from another employee who asked her to do something to end the file clerks' constant bickering.

Mrs. Moore called both clerks into her office and told them that their disagreements were disturbing herself and at least one other employee. She asked each of them to state what the condition of the room needed to be, to make it more comfortable in which to work.

Although the session did allow each clerk to thoroughly explain her viewpoint, the verbal exchange was not productive and provoked only a long list of physical miseries which each was suffering because of the other. Therefore, Mrs. Moore asked each to write short recommendations without explanation, stating how their needs could be met.

The file clerks' written suggestions effected an addition of one light in the file area, and removal of one fluorescent tube from a work station fixture.

The heat problem was not so easily resolved. Investigation (including contact with the maintenance and electricians' departments) revealed that structural changes would be necessary before a solution would be possible. However, each clerk recognized that compromise was necessary, and agreed that neither was at fault for their discomfort.

Points to consider when reviewing this incident with students:

- Setting, incident, people involved, action taken, result.
- Is there likely to be a long-term result?
- Why was it necessary to compromise about the heat problem? (Budget constraints, administrative policy, economic pressures, etc.)
- Alternative choices of action and their possible results.

If the action taken was appropriate and allowed each employee to maintain her dignity, yet cooperate in finding a solution, the long-term result would more than likely be positive. Employees are very likely to accept what obviously cannot be improved, if they are allowed to participate in reaching that conclusion.

However, if the action taken was autocratic and offered no opportunity for the file clerks to feel important in the decisions taken, discord would be likely to continue. Unless both quit at the same time, the effect of replacing them would be unlikely to solve the problem, as new employees would be subjected to the same issues.

SUMMARY

Critical incident strategies address problem situations which are analagous to those encountered in actual practice. Such situations are developed by simulating incidents drawn from professional practice, and providing a mechanism whereby students must analyze each incident and identify the issues, the results, and possible alternatives.

APPENDIX 5-4

STUDENT-STRUCTURED LEARNING

DEFINITION: In student-structured learning, the medical record student is the initiator and prime mover who chooses a learning activity which is a task having practical applications. S/he is the planner and developer, the one who conducts a trial operation and subsequently evaluates its progress and outcome.

The instructor assumes a dual role, sometimes performing as an advisor who guides the student without directing the project, and sometimes performing as the superior with whom a practitioner must interact in actual practice.

INTRODUCTION

In medical record education, student-structured learning experiences are most appropriate for special projects. Such experiences provide insights for the learner and the instructor, regarding the student's ability to plan, develop, conduct, and evaluate medical record operations.

The overall objective of such a strategy is to provide the student with an opportunity to learn and demonstrate behaviors they do not usually find in the classroom but will be expected to exhibit in practice, while guidance from an instructor is available (DePaul, 1976).

RATIONALE

Variations for student-structured learning participation are almost limitless, and it is always the student who chooses. A student may work alone, or more than one student may work on the same project. One student may choose to work alone during planning and development, then recruit others to assist with conduct and evaluation. Several students may want to work together, with each assuming responsibility for one phase of the process, e.g., one who plans and develops, one who conducts, and one who evaluates. Or, a group may choose to be involved jointly in all phases of the experience.

Aside from learning the skills and organization necessary for medical record operations development, indirect benefits may be realized in affective learning areas. The "loner" may discover that working with a group has definite advantages. The authority-reliant (teacher-structured) individual may become more confident in her/his ability to self-direct. A prospective manager may learn about the triumphs and pitfalls inherent in directing the efforts of others, and be able to manage or supervise more effectively in practice.

RELATIONSHIPS

The relationships between student(s) and instructor, during student-structured learning, may frequently simulate the relationship between the medical record practitioner and "the boss" (who may be an administrator, a department head, etc.).

In essence, the practitioner (student) makes a proposal, justifies its need, establishes objectives, plans and develops the operation, demonstrates its utility, and accepts responsibility for results. The "boss" (instructor) approves the proposal after asking for clarification as needed or suggesting alternatives, and thereafter monitors the process.

Students must be free to consult with the instructor when they think there is a need. However, decisions about their project(s) are their own responsibility, even though they must report regularly to the instructor/boss. This simulates the role of the practitioner in the field.

The instructor must fulfill another role, that of guiding the project without directing it. In most instances, that guidance will fit into the role of "the boss". For example, a teacher might say, *"You'd better check on ....", or "Make sure that .....",* while a boss would be more likely to say, *"Have you considered.....",* or, *"What will you do if .....",* or, *"Have you discussed this with .....".* From this posture, the instructor may need to address problems which students identify, or may need to point out problems students have not identified. When approvals are necessary, and when arrangements can be made only by the instructor, action may be necessary. When students encounter problems which are inherent to the project but which, in practice, they would have to handle themselves, the instructor provides only advice.

Essential facets of teacher/learner interactions during student-structured learning activities are:

1. the student is the initiator and prime mover, who is in charge of the project;
2. the student performs as a practitioner in the field would perform, and reports regularly to the boss/instructor;
3. the instructor is the primary advisor, whose expertise is one of a variety of resources; and
4. the instructor keeps the project on track by assuming the posture of a person to whom the practitioner/student is accountable, without taking charge.

WHAT THE STUDENT LEARNS

One concept is paramount when student-structured projects focus on practical activities: *this is new learning, and what is being learned is a process.*

While several already-learned subjects and skills may be necessary to conduct the project, the process (planning, developing, conducting and evaluating) is what is really being learned. The competency expected of a medical record professional must be demonstrated during training or on the job, and the logic of "process thinking", learned while a student, prepares a practitioner to meet process expectations of an employer.

Because it is the process which is being learned, if performance results in failure to accomplish project objectives learning still takes place. We all recognize that much can be learned from our mistakes, and that often our failures are remembered longer than our successes. Students *must* be permitted the freedom to fail in circumstances which place emphasis on learning rather than on success or failure. In-process evaluations by the student(s) should help identify necessary amendments to the plan. However, if decisions and/or activities take a wrong turn and the outcome is less than expected, the final evaluation conducted by the student(s) can identify what part of the process was handled inappropriately.

Once the process in its entirety has been learned, the practitioner can use all or part of that process to meet demands on the job. For example, membership on staff committees often requires involvement with *planning;* interdepartmental activities may require the medical record practitioner to participate in *development;* the ability to grasp the essentials of a plan and put them into action assists with *conduct* of operations developed by others; and *evaluation* techniques are necessary for every facet of an active medical record department's operation.

STRATEGY

The student is an active learner, performing a project one step at a time, completing one step before going on to the next and amending as necessary while the process unfolds. The instructor utilizes "report" sessions before and after each step, during which guidance is offered and reinforced. With establishment of this relationship, the student is assured of the independence which simulates practice, while remaining secure in the knowledge that, for this first effort, the instructor's guiding hand is available when needed.

One thing students will learn or reinforce during student-structured learning, is how to think and act independently. The corollary of these, learning to identify and use appropriate resources, must follow as an expected result. The teacher may feel there is a need, with some students, to provide a few suggestions at the beginning so students can make choices. This may help a student get off to a good start. However, an early weaning must take place before too much dependence is vested in the teacher. Throughout the exercise there is a delicate balance because, while students must be encouraged to ask for necessary advice, the instructor must be sure it's really advice that is wanted.

The key to maintaining this balance may lie in the student's approach to seeking advice: *"Where can I find out about.....",* or, *"Who can I ask....",* may indicate a willingness to investigate but a need to identify appropriate resources. On the other hand, *"How should I.....",* or, *"What do you want (think).....",* are questions more likely to be an attempt to have the instructor make decisions. The *where* or *who* inquiry deserves a straightforward answer, for example, *"I think I'd look (ask)....."* The *how* or *what* response may need a little finesse to put the decision back in the student's domain, such as, *"What do you want (think).....",* perhaps preceded by, *"How far have you managed to get.....".* Often, the student who asks the instructor what s/he thinks is actually asking for help with his own thinking; an outright refusal to help might be a crushing blow if such is the case, whereas leading the student through discussion of the problem often results in a student's decision.

The following checklist identifies the sequence and suggests elements of a strategy to guide students through learning a process by performing it. The checklist serves only as the instructor's tickler, and does not represent instructions which are to be given to students.

SEQUENCE OF ACTIVITIES

Announcement of an opportunity or requirement for students to conduct a student-structured project is made by the instructor:

I. ANNOUNCEMENT OF OPPORTUNITY/REQUIREMENT (Learning Principle 2)

A. Instructor announces at the beginning of the term, by

1. handout,
2. verbal announcement, or
3. combination.

B. Information included in the announcement

1. independent (of teacher) project
2. individual or group effort
3. purpose of the experience
4. date of expected completion
5. time(s) instructor will be available for discussion with students.

INSTRUCTOR'S CHECKLIST - STUDENT-STRUCTURED PROJECT

STUDENT: PROJECT:

ITEM (WHAT THE INSTRUCTOR LOOKS FOR DURING DISCUSSION)	DATE COMPLETED
II. STUDENT DECISION (Learning Principle 4) A. Student meets with instructor by appointment; instructor 1. explains roles of instructor and student 2. responds to inquires and/or concerns of student 3. identifies initial steps student must complete a. identify topic of project b. decide whether to work alone or with others c. recruit other students, if any d. establish performance and outcome objectives e. develop a preliminary list of resources 1) people 2) places 3) references f. develop a project proposal which includes justification of need for the operation, plus a-e above	
B. Student may respond "not interested" immediately, if that is an option.	
C. Student may respond favorably immediately if s/he chooses to do so.	
D. All other decisions are reflected in the proposal. E. If student is undecided, or has responded favorably, return appointment is established, during which: 1. student reports her/his decision, and/or 2. presents the project proposal (If project proposal is submitted, discussion ensues):	

INSTRUCTOR'S CHECKLIST (cont.)

ITEM (WHAT THE INSTRUCTOR LOOKS FOR DURING DISCUSSION)	DATE
III. PROJECT PROPOSAL (Learning Principles 6 and 7) A. Review of proposal (no instructor decisions) 1. appropriateness of objectives 2. likelihood of project completion during available time 3. amendments to proposal based on availability of a. time b. resources c. other students (if any) who participate	
B. If proposal is complete, student and instructor discuss next step (IV. below) C. If proposal needs more work, return appointment	
IV. PLANNING (Learning Principles 2 and 3) A. Importance of planning 1. elements of plan as it relates to proposed objectives a. who does what, and why b. sequence in which activities will occur c. how things will be done d. timing in relation to sequence e. people who may be able to act as resources f. contacts which must be made, and who is to make them g. how the project will be evaluated and who will do the evaluation 1) in-process evaluation (during performance) 2) final evaluation (outcomes in relation to objectives) 2. relationship of good planning to outcomes 3. probable need for amendment of plan during performance	

INSTRUCTOR'S CHECKLIST (cont.)

ITEM (WHAT THE INSTRUCTOR LOOKS FOR DURING DISCUSSION)	DATE
4. value of the experience if plan does not succeed	
B. Return appointment is scheduled	
C. Student develops the plan and submits it at the next meeting.	
D. Plan is reviewed (no instructor decisions)	
1. scope (is it realistic, given time and objectives?)	
2. omissions, if any	
3. relationships and expectations	
4. need for revision prior to next step	
E. If plan needs revision, appointment to discuss revision	
F. If no revision is needed, discuss next step (V. below)	
V. DEVELOPMENT (Learning Principles 3, 4 and 5)	
A. Discuss elements related to development	
1. contacts necessary to set up the project	
2. alternative contacts	
3. approvals which must be obtained	
a) appropriate person(s)	
b) scope of the approval granted by each	
c) approaches to be used in requesting approvals	
4. materials which will be required	
a) policies, procedures, forms	
b) references for study prior to and during development	
5. report mechanisms	
a) to those where resources are used)	
b) to the instructor) frequency	
c) among students involved) and format	
d) whether written or verbal)	

INSTRUCTOR'S CHECKLIST (cont.)

ITEM (WHAT THE INSTRUCTOR LOOKS FOR DURING DISCUSSION)	DATE
6. products (if any) resulting from the project a) to whom they will belong b) to whom they will be provided c) to whom they will be available though not provided	
7. facets of the project which must be evaluated a) during the project's performance b) upon completion of the project	
8. how evaluations will be conducted a. format for each evaluation 1) observation 2) forms 3) combination b. who does what c. when d. what will be reported, and to whom	
B. Return appointment is scheduled	
C. Student carries out development activities, including 1. creates a checklist of development activities, and marks them off as completed 2. makes contacts and secures appropriate approvals 3. establishes report mechanisms 4. reaches agreement(s) regarding trial operation 5. identifies what is to be evaluated 6. develops necessary materials 7. establishes starting and completion dates for trial operation 8. writes report of development for discussion (if agreed upon)	

INSTRUCTOR'S CHECKLIST (cont.)

ITEM (WHAT THE INSTRUCTOR LOOKS FOR DURING DISCUSSION)	DATE
D. Development activities are reviewed (no instructor decisions) 1. firm commitments 2. anticipated problems 3. present problems 4. amendments, if any, to original plan 5. amendments, if any, to objectives E. If further development is necessary, schedules appointment F. If no further development is necessary, instructor and student discuss the next step.	
VI. CONDUCT PROPOSED OPERATION (Learning Principles 4, 6 and 7) A. Discuss elements important to successful conduct 1. relationships (independence and teamwork; diplomacy; courtesy, persistence, etc.) 2. integrity of activities and reports 3. responsibilities assigned/assumed by others 4. need for amendment when indicated 5. expectations	
B. Return appointment is scheduled	
C. Student conducts activities 1. instruct) 2. supervise) 3. perform)according to plan 4. evaluate) 5. report) D. During conduct, returns to report to instructor as scheduled in the plan, or as need for advice arises.	

INSTRUCTOR'S CHECKLIST (cont.)

ITEM (WHAT THE INSTRUCTOR LOOKS FOR DURING DISCUSSION) DATE

VII. EVALUATION (Learning Principles 1, 4, 6 and 7)

A. In-Process Evaluation

1. identifies problems
2. makes appropriate amendments
3. re-evaluates to determine effectiveness of changes
4. repeats 1-2-3- as necessary

B. Final Evaluation

1. compares outcomes with objectives
    - a. establishes whether objective was or was not met
    - b. identifies partially met objectives, if any
    - c. identifies reasons for failure to meet objectives
2. Compares outcomes with plan and its amendments
    - a. Were activities carried out as planned?
    - b. When amendments were necessary, were appropiate people notified and involved?
    - c. Did amendments accomplish their purpose(s)?
    - d. Overall, was the operation mostly a success or mostly a failure, when reviewing the plan?
    - e. Identify reasons for any failure of the plan.

C. Draft final report of project, including descriptions of

1. reason for the project
2. project objectives
3. project plan
4. description of operation, including plan amendments
5. results of evaluations
6. recommendations for future efforts
    - a. needs identified if amendments will be necessary
    - b. reasons for failures, if any, and how to avoid them

INSTRUCTOR'S CHECKLIST (cont.)

ITEM (WHAT THE INSTRUCTOR LOOKS FOR DURING DISCUSSION)	DATE
7. self-assessment (may be a separate document) a. what was learned b. value of what was learned c. what would be changed if given another chance 8. include copies of products developed (if any) a. policies, procedures, forms b. training materials c. reference list(s) d. other	
D. Discuss draft report with instructor (no instructor decisions) 1. defend content 2. identify necessary amendments/additions	
E. Develop final report and create table of contents 1. disseminate report as described in the plan 2. announce availability to interested parties who did not receive a copy	

GRADING THE STUDENT (At last! An instructor's decision.)

The final report represents a term paper which will be only one facet of the grading process. In addition to the term paper, the grade must reflect the performance of activities, such as: independence (or reliance on the instructor), relationships with others, ability to adapt to unexpected situations, supervision of others (if any) during conduct of the activities, and astuteness and willingness involved when doing the self-evaluation. The student should be involved in the grading process and afforded an opportunity to challenge decisions.

SUMMARY

Student-structured learning experiences address the overall objective of providing a student with an opportunity to be the initiator and prime mover s/he is expected to be in practice, while an instructor is available to provide appropriate guidance in a non-success-oriented setting. The success which a student exhibits is related to performance of the process, rather than success or failure of the proposed project.

Projects chosen by students may be large or small in scope, from the simple selection of a new piece of furniture to the complex development of a quality assurance program. In addition, such activities are useful in preparing the student to address inservice education, budgeting, materials development, personnel evaluations, and systematic scrutiny of flow of information.

While the activities may vary and in some instances the complete outline for use by the instructor as a checklist may be unnecessary, the progression from one step to another simulates activites which are expected of the medical record practitioner in the field. The four basic steps of the process remain the same

PLANNING - DEVELOPMENT - CONDUCT - EVALUATION

APPENDIX 5-5

THE LECTURE

DEFINITION: The lecture is a discourse given before an audience or class, especially for instruction (Webster, 1980).

INTRODUCTION

The lecture is the predominant mode of instruction in medical record education, used as a one-way method for delivering factual information in the classroom and in clinical settings. As a form of instruction, the lecture has several advantages.

The lecture approach is economical. It may take less time for the instructor to prepare a lecture than to design an activity. Conduct of a session by the lecture method may require less time to complete than an activity which permits medical record students to have hands-on experience. In addition, one instructor can address a large group of students via lecture, whereas the monitoring of activities carried out by a group of similar size may be difficult to accomplish without assistance.

To change a curriculum which has relied on the lecture as a primary tool for instructing medical record students may require new resources of personnel, materials, equipment, and the necessary time for planning and development. At the same time, research suggests that medical record students prefer to learn under authority-reliant circumstances, and the lecture highlights the instructor as the central content authority (Frost, 1965). Therefore, the lecture may remain a principal mode of instruction while instructors prepare a more varied approach to meeting student needs.

Along with the above advantages, the lecture mode is recognized as having distinct disadvantages. Research has shown that an average of 80% of the information provided by lecture is forgotten within eight weeks (Frost, 1965). Often, lecturers attempt to crowd too much into one session, in an effort to address related topics as economically as possible. A few points may be remembered, but a majority of the relationships an instructor wants to emphasize may be lost. Finally, without necessary reinforcement and follow-up, a lecture which permits no active student participation becomes an isolated incident which fades into the background while exciting, concrete experiences are remembered. Thus, the most valid use of the lecture, that of relating factual information which needs to be retained, demands that presentation of data and facts be accompanied by some mechanism which assures better than 20% retention.

This Appendix reviews the purposes of a lecture, discusses methods for increasing effectiveness, and identifies ways an instructor can develop lecture presentations which afford the learner an opportunity to have concrete experiences which make the lecture memorable. These include:

1. when to use the lecture

2. content

(THE LECTURE, cont.)

3. delivery
4. evaluation.

WHEN TO USE THE LECTURE

It is important to identify what objectives can be achieved with the lecture method. Usually, lectures are effective when helping students acquire information, and not so effective for teaching problem-solving or changing attitudes.

When providing information, lecture cannot be replaced by a reading list for not all students will read a great deal on their own. An effective lecture emphasizes important ideas and may combine a lot of information from several sources, which students may not be able to do. The lecture may provide up-to-date information which is not available in required texts or publications.

The first step in planning a lecture is to consider the student. How much can the student gain from listening? Focus is on student performance: what should students be able to think, do, believe, or discuss at the end of the lecture which they could not do before? Are terms and descriptions to be learned? Deciding in advance affects the selection and organization of lecture content.

Once an instructor has identified what students must learn, it becomes necessary to have some idea of what they already know. Does the group really need to learn or know about the subject matter in its entirety? Is content appropriate given the time available? Is the intent of the instructor one of being informative, or persuasive, or thought-provoking?

Lectures can be made effective if the learning principles discussed in this chapter (Foley & Smilansky, 1980) are applied insofar as possible. (Not all the principles can be applied in the lecture mode.)

Positive and satisfying learning (Principle #1) set the stage for subsequent practice activities related to lecture material. This is, perhaps, the most difficult principle to apply in lecture mode, because statutory and regulatory constraints encourage medical record educators to approach many topics from a cautionary, negative stance. However, directing the tone of the lecture toward what a practitioner *can do,* rather than what *should not be done,* identifies challenges which make subsequent activities memorable, rather than frustrating, which make practice seem fruitless.

Understanding of underlying logic (Principle #2) is described by an old saying where lecture methods are concerned: "...tell them what you're going to say, say it, then tell them what you said." The instructor needs to consider what students must learn, and the time available, and then build in sufficient time to make sure students understand the importance and relevance of lecture content.

Variety of educational resources (Principle #3) suggests that learning aids can make the lecture experience memorable. These may include slides, films, handouts, exercises, brief quizzes, etc. These help the student to be an active learner *(Principle #4)* who participates in the experience, as opposed to a passive one who just listens.

During a lecture, *models of expected performance (Principle #5)* can be anecdotal comments about the instructor's own experiences, handouts which describe the efforts of others, flow charts or graphs which demonstrate results of an activity, or assigned homework which illustrates how activities have been successfully conducted. Following the lecture, subsequent practice activities involve the student in observing and performing relevant tasks.

Learning Principle #5 cannot be entirely satisfied with lecture, nor can Learning Principles 6 and 7 *(practice and feedback, and adapting learned knowledge and skills)*. However, an effective lecture can be used to introduce students to subsequent activities, and to inform them about the principles and practices which will be expected in the field.

CONTENT

THE INTRODUCTION

An effective lecture introduction clearly identifies specific topics to be addressed, in order, and what students will be expected to know or do after the material has been covered. For example: *"Today we will discuss the need for classification systems, how they are used, and benefits to be derived from their use in a medical record department. As a result of this session, you should be able to identify at least two types of classification, and be able to discuss their origins, applications, and present values in relation to the delivery of health care."*

In addition, there needs to be clear specification of the relevance of the material to be covered: *"It is important that you be familiar with the history of classification systems, because over the years these have changed and a record department may have in its files several versions of the same classification, or more than one classification system."*

Finally, ground rules for student participation help the group to zero in on what is expected of them during the lecture: *"You will receive handouts showing important terms which you need to know, and a short quiz will follow the lecture. If you need clarification at any time, feel free to interrupt."*

Opening with a question or questions that students need to consider during the lecture, or may be included in a quiz following the lecture, are other ways to make the introduction pertinent to students' learning needs.

The lecture's introduction needs to be carefully planned, for attention during the lecture and retention following it are influenced by emphases which are placed upon lecture content.

THE BODY

The introduction provides the framework for elaborating upon lecture content. It is important that the body of a lecture remain within that framework, without introducing new topics which serve to confuse a student or spending too much time on one topic. This can be accomplished by developing outlines of the content with time notations for each topic, which acts as a guide for planning and assists with keeping within the framework during delivery.

Clarification is important when what is being taught involves abstractions that demand concrete examples in order to be understood. Medical record students learn language as well as facts, and what is familiar to the professional may be foreign to the student (who is often embarrassed to ask). Students' perceptions differ, so more than one example may be necessary to illustrate a main idea.

Emphasis on key ideas is essential. Repetition helps students who are being bombarded with new information in several courses, who cannot be expected to learn important elements of theory and practice by hearing them only once. A glossary of terms may assist with this emphasis. When hearing a lecture is augmented by the ability to see visual aids and/or touch relevant handouts, a passive learner becomes an active one.

Change of pace is important, if the instructor is to insure attention is retained throughout the lecture. Research shows that after 20 minutes of listening, attention drops dramatically, so a relatively short attention span must be accommodated when developing lecture content. By making clear transitions from one topic to the next and providing some breathing space by altering the mode of delivery, the instructor helps listeners to remain alert to where they are. If visual aids are to be used, a switch from lecture to visual aid might accompany a shift in topics. Humor, questions, and demonstrations also help move from one topic to another by identifying there is a change.

THE CONCLUSION

The conclusion of a lecture is extremely important, for it influences what points will be recalled. A good conclusion relates back to the introduction. If the lecture opened with identification of topics, the conclusion reviews them briefly. If questions were used to open the lecture, the conclusion shows how they were answered, either by discussion or quiz. If objectives were identified, the conclusion reviews and summarizes them. A summary may include questions, reading references, or discussion of ways the material could be applied.

The key steps in planning a lecture are as follows:

tell them what you're going to tell them (introduction),

tell them (body), and

tell them what you told them (conclusion).

DELIVERY

An effective lecturer talks to 500 people as if only one person were being addressed. However, often a person who gives a dry, lifeless lecture will later discuss the topic with humor and self-assurance. The problem, as seen by Foley & Smilansky, (1980) is the discrepancy between the personality observed at the lecture platform and the personality away from it. Something happens when a "person" becomes a "lecturer", which must be considered by everyone who assumes that role.

Often a stage, lectern, and lecture notes remove the speaker from the audience for a variety of reasons and with differing results. Placing a barrier (the lectern or desk) between the speaker and the audience affords a measure of security to the insecure, and in body language may signify, "I'm apart from you, I am in charge." A complete script of the lecture prevents the speaker from moving away and talking informally. Reading a script tends to make the tone of voice a constant drone; if highlights are annotated to remind the speaker to use emphasis, they may "feel" unnatural to the lecturer and audience alike. Some lecturers speak too rapidly, or too slowly.

Use of a content outline that identifies only major topics and key facts helps a lecturer maintain flow and organization while it facilitates a conversational manner of speaking.

Varying the pitch and force of voice helps identify key points, and this can be accomplished by use of pauses, different speeds, and higher or lower voice tones.

Pace of the lecture depends on its content and the audience, and it is not possible to suggest a rate of speech. However, a beginning lecturer often finds it is helpful to tape the session and listen for improvements that can be made.

Eye contact is important when establishing rapport with the group, whether it be large or small. When the lecturer identifies a few people with whom eye contact will be made off and on during the talk, s/he soon finds it is possible to encourage eye contact with many.

Facial expressions must be as shifting as the voice and pace of a lecture, for the animated face may be as inappropriate as one which never moves a muscle, depending on the circumstances. Appropriate facial expressions usually indicate a relaxed presenter.

The effective lecturer moves purposefully. Remaining behind the lecturn, pacing from one side to the other, or standing with hands in pockets, may be ineffective in stressing a key issue or identifying a change in topic. Moving to the blackboard or screen, writing an outline on the board as each point is discussed, or distributing handouts, must be choreographed with lecture content to keep the entire "performance" on track.

Delivery skills point out general stage presence of an instructor. Being comfortable in that role and capable of alternative approaches, enhances the instructor's ability to teach effectively.

Finally, Murphy's Law must be remembered: If anything can go wrong, it will. If each lecture is viewed as a performance, and every prop or special effect is checked prior to beginning, suprises can be minimized. Attention to detail and preplanning separates the professional from the amateur.

EVALUATION

Response to a lecture provides an evaluation, whether the instructor is or is not prepared to be evaluated. Informal evaluations trickle back by way of conversations overheard in hallways, persistent references to the same topic when students approach for individual attention, and subsequent inability to recall data and facts included in the lecture. Formal evaluations of students are, in reality, an evaluation of the teacher's effectiveness; if all or most students fail to answer the same question on an exam, either the question itself or the way the material was taught may be faulty.

Research has demonstrated that one of the central elements in improving skills is to observe oneself in the actual performance of a task. Videotaping makes it possible to do this, so an instructor can see how s/he comes across to others. If videotaping equipment is not available, use of a checklist for rating a lecture can identify pertinent issues; the instructor, and/or fellow instructors and students, can benefit greatly from the application of such checklist criteria.

The following items are important considerations when checking the effectiveness of a lecture:

ORGANIZATION OF MATERIAL

1. Specifies purposes of the lecture in introduction.
2. Sets general ground rules for audience participation.
3. Relates the main body of information to the introduction.
4. Makes clear transitions between different segments.
5. Uses clear, relevant examples to illustrate main ideas.
6. Clarifies technical terminology.
7. Periodically summarizes most important points or ideas.
8. Develops a conclusion related to purposes and body.
9. Cites appropriate authorities to supplement statements.
10. Presents divergent viewpoints for contrast and comparison.
11. Separates facts from opinions.

VOICE AND BODY MOVEMENTS DURING DELIVERY

1. Speaks at a volume suitable (not too loud or too soft).
2. Speaks at a suitable pace for presentation.
3. Varies rate, pitch, and force of voice for emphasis.
4. Speaks in a conversational manner (not formal or stylized).
5. Uses eye contact (scans total audience).
6. Uses a variety of facial expressions (not deadpan).
7. Uses hands and arms appropriately (not hand waving, but for emphasis).
8. Moves purposefully (not pacing or sticking to lecturn, but moves for emphasis).

USE OF AUDIOVISUAL AIDS

1. Coordinates audiovisual aids with verbal presentation.
2. Uses audiovisual aids to enhance understanding of the subject matter.
3. Uses audiovisual aids which are easily visible or audible.

SUMMARY

The key to effective lecture technique is appropriate planning. Along with planning, the medical record educator must consider whether content is appropriate, too much or too little, too short or too long, and whether students can play an active role during the lecture which will reduce inattention and increase retention of the material addressed.

Content of a lecture must include an introduction which addresses topics and/or objectives, relevance of the material to be covered, and ground rules for student participation. The body of a lecture is identified by the introduction, and elaborates upon that framework; this part of a lecture must include clarification, emphasis, and change of pace, for effectiveness in responding to student learning needs. The conclusion of a lecture reviews what was supplied in the introduction, and identifies how those items were covered.

Delivery of a lecture, to be effective, must involve attention to conversational presentation so that the instructor talks to the entire group as if only one person were being addressed. This includes varying pitch, force, and tone of voice; pacing to suit the audience and the content; eye contact which includes the entire group; facial expressions which shift as voice and pace shift; and purposeful movements.

Evaluation of lecture techniques can assist the medical record educator with identifying and improving lecture skills. This can be accomplished through self-, peer, or student assessments, using a checklist.

The key steps in planning a lecture are, (1) tell them what you're going to tell them (introduction), (2) tell them (body), and (3) tell them what you told them (conclusion).

APPENDIX 5-6

SMALL GROUP LEARNING

DEFINITION: Group deliberation, carried on through oral discourse, aiming at the cooperative solution of a problem or resolution of an issue through reflective thinking (Wagner & Arnold, 1965).

APPLICATION: Learning which takes place through the combined efforts and interactions of several students.

INTRODUCTION

"Fundamental to small group methods is the concept of social interaction. *For practical purposes, 'interaction' usually means discussion. Therefore, discussion is the process around which most, if not all, small group methods have been developed. Although some methods may also involve students in other activities (role playing, games, etc.), discussion at some point is almost inevitably a critical part of the instructional procedure"* (Olmstead, 1974).

A group often has a "leader" whose role is to clarify previously learned content and ensure that discussion addresses clinical application or implications of what the learner already "knows". Such discussions follow lectures, readings, role-plays, movies, laboratory work, and other learning modes in which material has been presented.

ADVANTAGES

Learning in small groups provides an opportunity for active student participation, with a high instructor-student ratio. Skillful instructors can then discover individual student problems, and help students understand materials addressed by lectures or other modes of learning.

In a well-planned small group setting, students learn from each other. This helps them recognize that several viewpoints may result in more realistic conclusions than if each person relies only on her/his own resources.

The individual can become adept at the interactions expected of a professional, and be prepared for dealing with groups as a manager, with employees, and with other managers.

Working with other students in a small group activity also leads students to view peers as resources during their professional lives.

DISADVANTAGES

More faculty time may be needed for small group learning activities, than for lectures or readings. This may be difficult for the medical record instructor to justify, if activities are improperly conducted and/or results are less than anticipated.

Without the right planning, an instructor may find that students ask questions and parts of previous lectures are redelivered, rather than getting at what is troubling the students by approaching the material in a way they can better understand.

If a group leader lacks the skills necessary to keep the group "on track" and assure that everyone participates, one or more members of a group may dominate the discussion or activity. This enables a minority to meet their needs, while the rest of the group becomes bored and/or frustrated.

TYPES OF SMALL GROUP ACTIVITIES

Choice of one of the following methods is based on the instructional objectives one wishes to accomplish. An uneven number of participants is preferred (to avoid deadlocks), 5-7 members being the ideal arrangement.

CONFERENCE METHOD

The conference method is a series of planned meetings with defined objectives, during which collective or individual problem-solving occurs. Thinking and attitudes may also be broadened through this approach.

PRINTED CASE ANALYSIS

The group is presented with a printed description of a situation. Personal analysis, group discussion, and a final decision result. This method leads to skill in identifying a problem, as distinguished from symptoms of the problem. It also makes the participant aware of the problem from various viewpoints.

DRAMATIZED CASE ANALYSIS

A variation of the printed case analysis, the stimulus for discussion and analysis is presented through film or tape recordings. The objectives are the same as in the printed case analysis method.

BUZZ SESSION

Without advance notice, this informal group method is a brief, intense discussion in which the instructor does not participate. The method acts as an introduction to a formal presentation of more advanced material. It may also be used to consolidate a class's questions, to be answered by the instructor later on.

ROLE-PLAYING

To improve skill in evaluating interpersonal relations, behaving more effectively in such situations, or gaining insight into problem solutions in such situations, this method is ideal. An imaginary situation is presented to the group members and an appropriate number of those members are asked to enact their responses. Observations of the audience and actors are then discussed. The scene may be replayed following discussion, to try out identified alternatives. Videotaping the action allows participants to observe themselves and critique their reactions.

FIELD TRIPS

It is sometimes difficult to discuss a situation when the student has no sense of the atmosphere of the occurrence. Therefore, the instructor makes arrangements for a group to go to the health facility medical record department, health agency, or office equipment supplier, for example. Students are encouraged to ask questions of the host. Upon returning to the classroom, a discussion centers on impressions and comparisons. The entire class can benefit from one small group's experiences; in this way, groups can undertake different field trips.

STUDY GROUPS

An informal gathering of students to study a particular topic for deeper insight or as a pre-examination review. A particularly useful variation of this method is to have an upperclassman lead the group's activities.

TOPIC DISCUSSION

Without an instructor present, a group leader guides the discussion of an assigned topic, problem, or issue, and then reports the group's summary comments to similarly designated groups of class members. Insights into issues or problem solutions are achieved through this method.

DYADS AND TRIADS

Dyads and triads (pairs and trios) are a particularly effective way to use very small groups. Pairs of students can drill each other, or compare notes about particularly technical subjects. Three students can perform practice sessions such as personnel interviews, in which one student represents an applicant, another is the interviewer, and the third is the observer who measures performance against a checklist.

DEVELOPING SMALL GROUP ACTIVITIES

The first step in planning a small group discussion session is to identify what students already know. Strategies can then be developed to improve student understanding of previously learned content and/or assist students with applying basic principles to clinical applications. Three techniques can be used to determine student comprehension:

- post test
- twenty questions
- direct questioning

The post test can be used to identify knowledge gaps. Twenty questions can be generated by students, to see who can ask the most difficult, relevant, or thought-provoking questions based on the content received in previous study. The group leader may use direct questioning to ascertain what the students do not understand.

A checklist may be designed as an assistance to planning a discussion session. The checklist should include the following:

- specific objectives to be achieved
- method to diagnose student comprehension of covered material
- activities to insure attainment of objectives
- provisions for utilizing additional time once planned objectives are attained
- materials needed for session
- conclusion
- overview, instructions, and assignment for next session

Delivery skills in small group discussion sessions include organizing the setting (chair arrangement, correct lighting, etc.) and making a list of required materials and equipment. The introduction of a discussion includes a statement of goals to be accomplished, planned activities, and ground rules for the discussion. The group leader must guide the discussion but restrict tendencies to constantly provide information. Guiding the discussion includes the ability to clarify student responses, and to lead them to clarify their own responses. Often, the best clarification is to ask questions which test the reasoning behind responses. This teaches the student to justify her/his thinking.

Fostering student-to-student interaction is a goal of the group leader who is conscious of good group processes. This can be accomplished by requesting students to comment on each other's responses, or addressing a question to the group at large and remaining silent, placing responsibility for discussion on the group. Encouraging student-to-student interaction may encourage future colleague-to-colleague interactions.

An atmosphere must be created where there is an expectation for student participation without putting individuals on the spot. The group leader is also responsible for keeping the discussion on track, and providing periodic summaries prior to a transition to the next goal or topic.

The conclusion involves a review of what students were expected to gain from the discussion, what has actually been done, and what will come next.

SMALL GROUP LEARNING (cont.)

No plan can ever anticipate all events that may occur, nor can it ever predict the precise atmosphere that will develop in any particular learning group. The most effective plan is flexible so adjustments can be made.

STRATEGIES

1. DRAMATIZED CASE

A film of a medical record administrator interviewing an applicant for a job as supervisor in the administrator's department is viewed by the group.

OBJECTIVES

- Determine, through watching the film, helpful and non-helpful interviewing techniques.
- Discuss the correct and incorrect techniques found in the film.
- Determine the conclusion the interviewer would have reached concerning hiring or not hiring the interviewee.

QUESTIONS FOR DISCUSSION

What questions were asked by the interviewer?

- appropriate questions
- inappropriate questions
- legally acceptable questions
- illegal questions

Did the interviewer seem relaxed?)
)--how were their attitudes exhibited?
Did the interviewee seem relaxed?)

Was the opening or beginning of the interview helpful? A hindrance? To whom?

Was the time well spent?

How could time have been spent more productively?

What were your feelings toward the interviewee?

Would you have hired the applicant, based upon information gleaned during the interview?

If you had been the applicant, would you have taken the job?

2. WRITTEN CASE STUDY

Read the case study of a problem in a hospital, such as operative reports which are not transcribed on a timely basis.

OBJECTIVES

- Sort out the available information for the most relevant facts.
- Prioritize those issues.
- Determine alternative solutions, and choose one.
- Report on group conclusions:
    (a) to the instructor (written or oral)
    (b) to the class as a whole, for further discussion.

3. DIRECTED CONFERENCE

A series of meetings or inservice training sessions are held on the topic of confidentiality and release of information.

THE FIRST SESSION covers routine requests for information, policies, and procedures.

THE SECOND SESSION reviews medical staff and administrative staff requests for information, touching upon both proper and improper methods.

THE THIRD SESSION has the group reviewing requests for information from legal sources, such as the police or the medical examiner.

THE FINAL SESSION covers requests from relatives of patients, the media, and the general public's need to know.

4. FIELD TRIP

A psychiatric health care facility will be toured.

OBJECTIVES

- Compare the policies and procedures of a psychiatric facility with those for a general medical/surgical facility.
- Identify the quantitative analysis elements and procedures.
- Identify the rules of confidentiality and release of information.

5. ROLE-PLAY

Students are divided into groups of three and are told to act out the roles of an employee and a supervisor involved in a corrective action proceeding for poor work performance. The third person in the group is the observer. The observer is equipped with a checklist to identify important points for each player. The checklist has been described to all students in a lecture before the role-play assignment.

The actual role-play sessions can be videotaped, and reviewed by the entire group, following the guidelines of the checklist.

6. THE BUZZ SESSION

The instructor first lectures on the topic of quality and quantity standards for a particular department. The instructor then divides the classroom into small groups of 5 to 7 people. Each group will choose its own leader and recorder. The leader is responsible for keeping the group on track; the recorder must prepare a report which will be returned to the instructor.

The instructor defines a time limit for discussion, such as 15 minutes, and proposes the following objective:

- To focus on questions defining, establishing, and monitoring work standards.

The recorder of each group lists questions which the group identifies. The instructor utilizes these questions to continue the lecture, focusing on the questions elicited by the buzz session.

7. STUDY GROUP

The group is led by an upperclassman who organizes a discussion and answers questions, in preparation for an upcoming examination.

The upperclassman may prefer to ask the group, in advance, to prepare a list of questions for review. Or, s/he may want to respond to questions spontaneously when the group meets, without advance preparation.

The instructor needs to meet with the upperclassman in advance, if there are particular points which s/he wants to make sure the upperclassman covers during the study group's meeting.

8. TOPIC DISCUSSION

Students are asked to read a case study of a management problem prior to class. In class, the instructor defines the problem for discussion (associated with the case study). The discussion is limited to 20 minutes. The entire group is divided into smaller groups, with a leader and a recorder for each group. The recorder later becomes a member of a panel, which discusses the high points of each small group's deliberations. Finally, the entire class reaches a consensus regarding the issues of the problem.

Chapter 6

Teaching Strategies

INTRODUCTION

In reviewing the literature on teaching strategies, we have noted that a great deal of research has been done to identify how people learn, and then to develop teaching strategies that would facilitate the learning process. Equally useful have been the efforts to identify which strategies are most effective in presenting different aspects of a curriculum. For example, programmed instruction provides instant feedback as to the accuracy of the learners response. Realizing this, we can easily extrapolate its usefulness in teaching medical terminology, a subject which requires that the student receive feedback as quickly as possible to ensure the accuracy of the knowledge being acquired.

In this chapter we have attempted to describe a number of teaching strategies which are appropriate to both the affective and cognitive domains and which also provide for individual and group learning activities.

In our examples we have selected subjects from the medical record curriculum and strategies that we believe are useful and manageable for the neophyte instructor. We have found that much of the clearest and most directly useful material available for a beginning teacher can be found in the literature designed to reach training and development instructors. The annotated bibliography contains a number of these resources.

SELECTING TEACHING STRATEGIES

Educators in the field of medical record science can become increasingly proficient in developing courses and lessons relevant to the needs of their students through their careful and thoughtful choices of teaching/learning strategies. The choice of instructional strategy *(i.e., "What method shall I use?")* is multidimensional; it flows from both the external factors which influence method selection and from the variety and range which exist among the strategies themselves. The successful blending of these two components can lead to a productive learning situation.

In choosing an instructional strategy, the medical record educator should consider the following factors:

1. Is the strategy suited to the course objectives? If the final performance of the learning segment requires the student to perform a certain skilled operation, does the strategy allow the student to see a model performance? To practice performance individually? To receive feedback on individual performance? If the instructional aim is to develop a certain attitudinal stance on the part of the student, does the strategy chosen allow the student to express personal views? To simulate situations in which this attitude would be reflected in action? To receive feedback on how others perceive the individual attitude?

2. Is the strategy suited to the particular teaching situation: to the instructor, to the students, to the physical setting?

    a) Is the instructor working from a position of strength? Is this a strategy that is familar, comfortable? If the strategy is unfamiliar, is the instructor venturing into the situation "with caution and vigour?" (Renner, 1980). Has the instructor, on the other hand, successfully avoided the "technology trap,.....the fallacy of the inherently superior method...where the instructors continue to use one particular approach simply because it worked well in previous situations or because they are familiar with it" (Green, 1978)? Is the instructor aware that, gadgets galore not withstanding, countless and ceaseless educational research projects indicate that "the caring teacher is probably more influential in promoting learning than any method" (Green, 1978)?

    b) Is the strategy chosen appropriate to the expectations of the students? A film does not effectively replace a field trip if the students' reasonable expectation is for on-site experience. Does the students' experience prepare them to accept and profit from the strategy? Students long accustomed to passive note-taking in lecture halls will need to be prepared for and eased into the use of buzz-groups or open discussion methods.

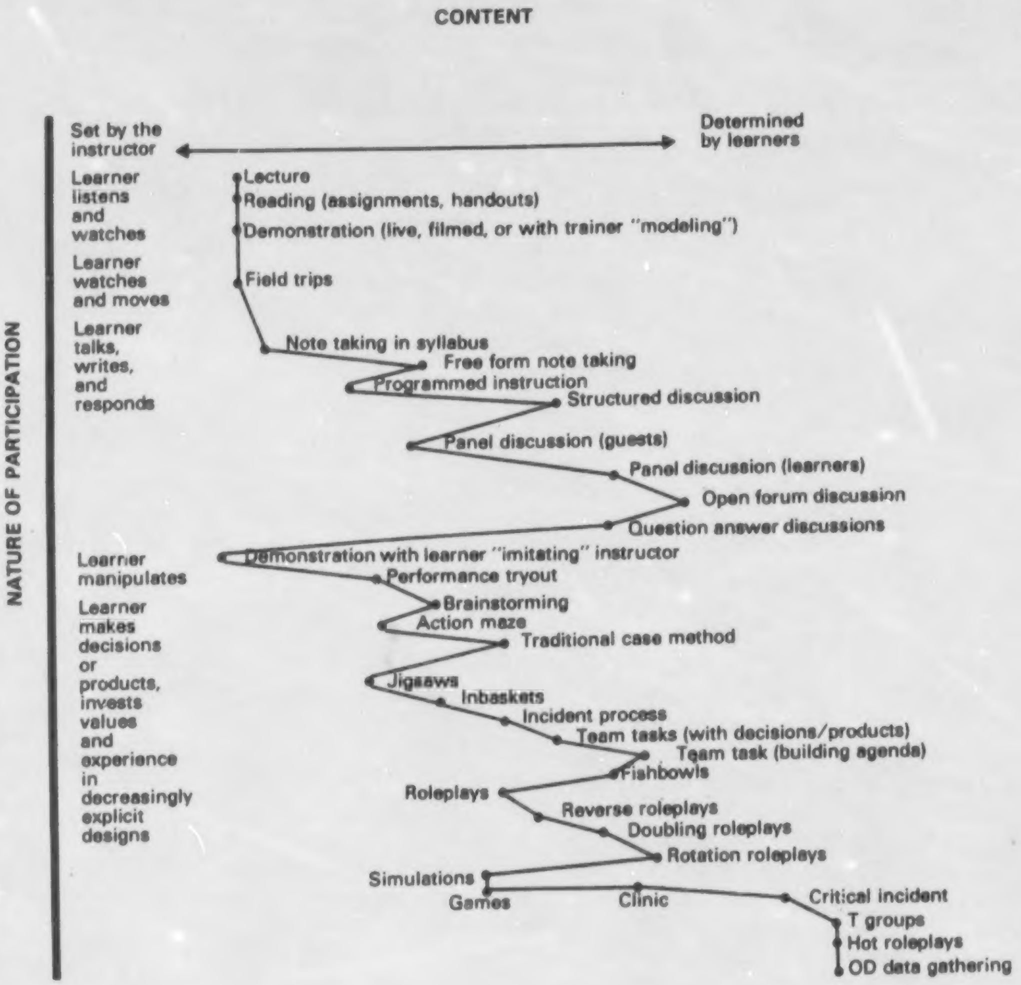
c) Is the strategy chosen appropriate to the course content? The lecture format is conducive to the rapid dissemination of factual (verbal) content to large groups but will hardly aid the student to learn the manipulation skills involved in key punching or assembling records.

3. Is the strategy suited to the prevalent physical and financial constraints? What time, equipment and cost factors are going to influence the teaching format? All the educational theory in the libraries can be brought face-to-face with hard reality at this point. Practicality dictates that the best instructional strategy to use may well be the one "that will produce the learning desired within the limitations of the classroom, available equipment, preparation time and budget" (Broadwell, 1978).

Instructors who attempt to research a variety of teaching strategies can easily find lists and descriptions of literally dozens of techniques. (Renner lists 20: Laird, 32). Each compiler tends to arrange the methodologies according to a specific point of view.

Renner, (1980) for example, categorizes teaching techniques according to what the instructor wants to accomplish. Some strategies, for example, are appropriate if the goal is to help the learner develop knowledge about facts, figures, concepts, etc. (eg. assigned reading, lecture, field trip.) Others are appropriate when the goal is to develop attitudes or values (eg. role-playing, discussions, critical incident).

Dugan Laird (1978) creates a matrix of methods based on what modern learning theory stresses about adult learners. Adult learners value having some degree of ownership and involvement in the learning process. Laird arranges the methods, therefore, on a continuum of the nature of learner participation from the lecture, where the learner listens and watches, to hot role-plays, where the learners determine the content and work out the actual classroom activity from their own experience. (See Figure 1)


CONTENT
NATURE OF PARTICIPATION
Set by the instructor
Determined by learners
Learner listens and watches
Learner watches and moves
Learner talks, writes, and responds
Learner manipulates
Learner makes decisions or products, invests values and experience in decreasingly explicit designs
Lecture
Reading (assignments, handouts)
Demonstration (live, filmed, or with trainer "modeling")
Field trips
Note taking in syllabus
Free form note taking
Programmed instruction
Structured discussion
Panel discussion (guests)
Panel discussion (learners)
Open forum discussion
Question answer discussions
Demonstration with learner "imitating" instructor
Performance tryout
Brainstorming
Action maze
Traditional case method
Jigsaws
Inbaskets
Incident process
Team tasks (with decisions/products)
Team task (building agenda)
Fishbowls
Roleplays
Reverse roleplays
Doubling roleplays
Rotation roleplays
Simulations
Games
Clinic
Critical incident
T groups
Hot roleplays
OD data gathering

Laird, Dugan,
Approaches to Training and Development
Reading, MA: Addison Wesley, 1978.

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Figure 1
Duo-dimensional list of methods

The blending of the external factors which influence selection with the nature and range of the strategies themselves is the personal choice of the individual instructor. There is no hard and fast rule to guide this choice; those whose career it is to *"train the trainers"* all agree:

> *"The suitability of all techniques is relative."* (Renner, 1980)
>
> *"Methods are simply the means."* (Green, 1978)
>
> *"There is no sterotype for a good instructor....It is up to the individual (instructor) to select and use those things that fit his or her personality, course content and particular group(of students)."* (Broadwell, 1978)

Here are some suggestions on appropriate uses of the teaching techniques described in the glossary. Depending on what you want to do (A to G), some are more useful than others. The categories are based on Malcolm Knowles (1975). See Figure 2.

A - To help the learner *develop knowledge* about facts, figures, concepts, generalizations about experience, internalization of information.

B - To help the learner to *develop understanding*...application of information and generalizations; relating theory to the real world, making connections between classroom learning and learner's previous experience.

C - To help the learner to *develop skills* in performing certain tasks, operating equipment, handling tools, practing new behaviors.

D - To help the learner to *develop attitudes* towards issues, situations, problems; adopting new feelings through experiencing greater success with them than with old feelings (and attitudes and behaviors).

E - To help the learner to *develop values* ...adopting and putting in order of priority certain beliefs.

F - To *involve learners actively* in the learning process through participation.

G - To *obtain feedback* on learner's thoughts and feelings about what is going on.

Teaching Techniques	A	B	C	D	E	F	G
Lecture	*						
Assigned reading	*				*	*	
Demo & Practice		*	*			*	
Field trip	*	*				*	
Panel-forum	*					*	
Discussions		*	*	*	*	*	*
Buzz groups		*			*	*	*
Brainstorming	*	*				*	
Games/Exercises		*	*	*	*	*	
Role-playing		*	*	*	*	*	
In-basket		*	*	*	*	*	
Critical incident case study		*	*	*	*	*	
Programmed Instruction	*		*			*	
Closed circuit TV	*	*	*	*		*	
Audio-tutorial methods	*		*			*	
Learning contracts	*	*	*	*	*	*	
Independent study	*	*		*	*	*	*

FIGURE 2 TEACHING TECHNIQUES

(Adapted from Renner, 1980, in turn adapted from the work of Malcolm Knowles)

GLOSSARY

POSSIBLE APPLICATION	TEACHING STRATEGIES
All aspects of curriculum	1. Lecture is a prepared, formal presentation of information. The lecture is effective in conveying factual knowledge rapidly to fairly large groups. The learners, however, remain relatively passive. A lecturette is a ten minute lecture.
All aspects of curriculum	2. Reading Assignments are often the least expensive and most convenient way to expose learners to large quantities of content, unavailable to them in other formats. Reading assignments are most effective when preceded by a study skills overview and followed by discussion or application of the content.
Coding; statistics; terminology	3. Drill and Practice provide the learner with the opportunity to repeat a mechanical or frequently used task to the point of proficiency.
Filing; assembling	4. Demonstration/Performance Tryouts emphasize the development of specific psychomotor competencies. A good demonstration provides step-by-step analysis of a process, opportunity for immediate learner practice, and appropriate feedback and reinforcement from the instructor.
On site experience	5. Field Trips offer opportunities for learners to receive sensory input impossible in the classroom. The learner should know in advance the precise goals and evaluation mechanisms of the field trip and should be held accountable for gathering specific information.

POSSIBLE APPLICATION	TEACHING STRATEGIES
Topics in Health Care Delivery; Presentations by Department Heads/ Health Specialists	6. Panel Discussion/Symposium tends to be a series of short lectures given by a group of experts especially assembled for that purpose. Learners can remain passive in this situation unless they are prepared to question the panel and are actually given enough time to do so.
Management topics; values clarification	7. Peer Group Discussions are small group (5-7) conversations in which the learners are responsible for accomplishing certain pre-set goals. Peer group discussions stimulate the sharing of learning and can promote an atmosphere helpful to attitude change. A debriefing or reporting time after the group discussion reinforces the learning experience.
Management; personnel; communication skills	8. Team Tasks/Buzzgroups are small (5-7) groups of learners with a specific task to accomplish, often within a set time. The small groups report their achievement or findings back to the larger group for discussion. Team tasks can promote a high level of learner involvement.
Problem solving; management	9. Brainstorming is a special form of group discussion. It can be a valuable strategy for teaching creativity in problem solving or more basically for teaching participants to suspend negative judgements until a given point in the group process.
Budgeting; purchasing; interviewing	10. Games/Simulations/Dramatizations usually have clear, step-by-step rules or guidelines leading to a pre-set "successful" conclusion. Some type of team interaction is often called for and competition between teams is often used as a stimulus. These techniques provide practice in newly acquired interpersonal or managerial skills.

POSSIBLE APPLICATION	TEACHING STRATEGIES
Management; interpersonal skills	11. Role-plays permit the learner to try out first person action and feelings in situations very like those faced on the job. Each role in a role-play is delineated clearly enough for the player to "take on" the role. Feedback from role-play can deal either with content or with the interaction process.
Decision making	12. In-basket Exercises present the learner with a simulation of the paper work load of a given job. As the learner disposes of the items in the in-basket, s/he must demonstrate decision making, priority setting, and delegating skills. Discussion and follow-up are essential to in-basket exercises.
Wide range of management activities	13. Case Studies describe in some detail (up to 20-30 pages) a specific problem situation. Learners receive enough facts to analyze the problem and to make a recommendation or action plan. When learners discuss case studies in small groups, they tend to participate at a high level of involvement.
Wide range of management activities	14. Incident Process is a variant of the case study. The learners receive a brief description of an incident but not enough detailed information to analyze the situation. They must question the instructor to obtain the needed facts. The incident process teaches the skills of interrogation, analysis, and synthesis.
Management; research	15. Independent Study allows the individual learner to pursue topics of his/her own interest. The learner selects the topic, the manner and time of approach, and often the method of presentation. The instructor usually provides periodic coaching during the independent study.

POSSIBLE APPLICATION	TEACHING STRATEGIES
Terminology; statistics; abstracting; coding	16. Programmed Instruction/Computer Assisted Instruction brings learning about by teaching machines, programmed texts, or computer. Designed for independent individual instruction, programmed material often requires, nevertheless, the intervention of an instructor or counselor. Programmed instruction is most helpful when the material is straight-forward and relatively unchanging or when the students are widely separated by skill, learning pace, or simply by geography.
Interviewing; interpersonal skills	17. In-house or Closed Circuit TV permits the learners to see themselves on the video screen in role-plays, group discussions, etc. The learners gain a perspective on their own interaction and communication skills which they might otherwise never attain. T.V. can be used this way for individual coaching or group learning.
Statistics; coding; terminology	18. Audio-tutorial Materials allow the learner to progress at a self-chosen pace while receiving input from an audio tape and following directions in a workbook or on a guide sheet. These materials are helpful when the course content is stable and learners are few in number or widely varied in skill.
As appropriate	19. Contracts are written agreements between the instructor and the individual learner. The learner's goals, intended product, and methodology are usually indicated in the contract, as well as agreed upon evaluation criteria. Contracts may be used in individual instruction when the instructor desires to personalize assignments or outcomes.

TEACHING STRATEGY: LECTURE/ASSIGNED READING

1. SUBJECT MATTER TOPIC: The use of needs assessment techniques in the development of inservice training programs. This is an example of the responsibility of the RRA to develop inservice training programs.

2. OVERALL PURPOSE: Students will know and understand the range of possible needs assessment techniques, the advantages and disadvantages of the various techniques, and the order of needs assessment in the planning of inservice programs.

   Assigned reading is a strategy chosen to expose learners to large doses of material effectively outside of class or group time. Instructors might supply students with questions to be kept in mind while reading, grade sheets for the reading, or topics for discussion after the reading. In any case, assigned reading should have (1) a pre-announced purpose, (2) a follow-up use, and (3) relevancy to the subject or task at hand.

   Lecture (20-30 minutes) or lecturette (10 minutes) is chosen as a strategy when an instructor wishes to present factual information that is not available to the student in other formats. Lectures are most efficiently used when the material is factual, introductory, or intended for short-term memory retention. A good lecturer outlines the main ideas at the outset of the presentation and allows for a debriefing (question and answer) period at the close.

3. SPECIFIC OBJECTIVES: The student will be able to:

   a. define an "educational need".
   b. explain the M-I=D (minimum mastery minus inventory equals deficiency) as used by Dugan Laird.
   c. list at least four sources of potential inservice training needs in a Medical Record Department.
   d. name at least five needs assessment techniques that could be used to determine inservice training needs in a Medical Record Department and list two advantages and two disadvantages of each technique.

4. SPECIFIC FINAL PERFORMANCE: Students will demonstrate the achievement of the cognitive learning objectives stated above by listing, defining, or explaining the terms in question on a short answer, total recall written quiz.

5. BACKGROUND OF STUDENTS: Senior medical record students in *"Train-the trainer"* course for allied health personnel. They should have completed several clinical experiences in which they would have had opportunity to observe and experience training needs within a Medical Record Department.

6. SPECIFIC CONTENT:

   a. Methods of determining and responding to training needs as presented in chapter 5 and 6 of Approaches to Training and Development by Dugan Laird (Reading, MA: Addison Wesley, 1978).

   b. Types, advantages, and disadvantages of nine(9) needs assessment techniques as presented by instructor in lecture based on:

      (1) Campbell, M. Donald. Before You Plan Educational Programs: Find out what's needed. Urbana-Champaign: Office of CE and Public Service, University of Illinois, 1980.

      (2) Kirkpatrick, Donald L. "Determining supervisory training needs" Training and Development Journal, January 1980, pp. 56-61.

7. WHAT IS NEEDED:
Text: Approaches to Training and Development, Laird.
Handout: Needs Assessment Grid to develop. See Figure 3.
Chalkboard or newsprint.
One class session.

8. STEP-BY-STEP PROCEDURES:

   a. Pre-class - Instructor assigns chapters 5 and 6 in Laird and requests that students be prepared to discuss the formula M-I=D as it could be applied within a Medical Record Department.

   b. Class session

      (1) Instructor questions students briefly on terminology used in Laird (need, deficiency, minimum mastery), requesting examples of these terms in a Medical Record Department setting.

      (2) Instructor distributes grid on which nine (9) needs assessment methods are listed with spaces for their definitions, advantages, and disadvantages.

      (3) Instructor spends approximately 10 to 20 minutes defining and explaining the first five (client-centered) methods.

      (4) Instructor assigns class work in pairs for three minutes, one-half of class to list one advantage they see in each method (based on their experience and reading of Laird) and the other half to list one disadvantage to each method.

(For lecture/assigned reading)

	Assessment Technique	DESCRIPTION	ADVANTAGES	DISADVANTAGES
1.	audits, records reports			
2.	books, journals newspapers			
3.	key consultants			
4.	observation			
5.	personal interviews			
6.	questionaires, surveys			
7.	regulations, protocols, procedures			
8.	tests, quizzes			
9.	other, as fits the setting			

Figure 3:Needs Assessment Grid

(5) Instructor guides student in filling in the grid for the first five methods, taking suggestions from the class and supplying additional information as needed.

(6) Instructor repeats steps 3, 4, and 5 for the remaining four methods.

(7) Instructor announces short answer quiz on this factual material for next class, allows students approximately 5-10 minutes question and answer time to clarify any uncertainties they may have about the information.

9. EVALUATION: Since the instructional objectives for this reading/lecturette strategy were cognitive (knowledge, understanding), a short answer objective test can be considered an appropriate evaluative tool.

10. COMMENTS: Reading assignments and lecture presentations are strategies in which the student can manage to remain quite passive and blissfully uninvolved with the material. The instructor's responsibility in this case, is to provide as many goals as possible to stir the student to action. Guided questions for reading, outlines or grids to be filled in, specific discussion or question and answer interludes can all serve to stimulate student participation and involvement.

The lecture itself is best kept to twenty minute or six main-item segments.

TEACHING STRATEGY: DEMONSTRATION AND PRACTICE

1. SUBJECT MATTER TOPIC: Completion of a data service abstract. This is an example that reflects the responsibility of the ART to abstract Health Records for the collection and processing of statistical data.

2. OVERALL PURPOSE: The student will be able to complete a computer abstract correctly. They will be able to select the appropriate information from the medical record and enter the data in its specific block. They will understand the importance of accuracy in completing the abstract forms.

   Demonstration and practice is a teaching strategy which (1) demonstrates to a student the way to perform a certain task, (2) allows them to practice the task immediately, (3) provides help and feedback to the student as appropriate, (4) allows the teacher to detect problems in performance so as to provide additional instruction and practice.

3. SPECIFIC OBJECTIVES: The student will be able to:

   a. Define the purpose and use of a data abstract as a tool for collecting medical information.
   b. Locate the required information from a medical record.
   c. Enter the data into the appropriate block on the abstract.
   d. Check the abstract to make sure that it is complete.
   e. Complete a prescribed number of abstracts within a given time period.

4. SPECIFIC FINAL PERFORMANCE: The student abstracts in a given time period with a 100% accuracy level.

5. BACKGROUND OF STUDENTS: Medical record students in a mid-level course. They should have completed that section of the curriculum that covers the technical aspects of medical record service.

6. SPECIFIC CONTENT: Written procedure for abstract completion taken either from the manual published by the Data Service, or an in-house procedure developed by a hospital Medical Record Administrator.

7. WHAT IS NEEDED:

   a. Supply of abstracts.
   b. Sample medical records. May be facsimile records or specifically designed records which contain special problems.
   c. Samples of completed abstracts.

8. STEP-BY-STEP PROCEDURES:

   a. Explain the purpose of completing an abstract.
   b. Stimulate brief class discussion as to any prior experience or knowledge relevant to abstract completion.
   c. Review the written procedure with the group.
   d. Distribute an abstract and record to each student.
   e. Go through the steps of abstract completion.
   f. Have each student complete a second abstract utilizing the procedure guide to assist them.
   g. Answer questions.
   h. Have each student complete three more abstracts.
   i. Instructor circulates offering assistance as needed.
   j. Initiate group discussion of process, difficulties, special problems, etc.
   k. Distribute five more abstracts and records to each student.
   l. Instruct students to complete in the given time frame.
   m. At conclusion of time frame, have students turn in their 5 abstracts.
   n. Instructor will return corrected abstracts at next session.

9. EVALUATION: Instructor will review abstracts for accuracy and completion.

10. COMMENTS: Demonstration and Practice is a useful strategy in teaching those aspects of the curriculum which require learning a specific skill, at a specified level of competency. It would be very useful in teaching coding and hospital statistics.

TEACHING STRATEGY: FIELD TRIP

1. SUBJECT MATTER TOPIC: Computerized Master Patient Index. This is an example that reflects the responsibility of the RRA to supervise helath information retrieval activity and that of the ART to maintain existing manual or automated systems for the retrieval of health information.

2. OVERALL PURPOSE: To provide the student with observation of an operating computerized application and the role of the MRA in its development, implementation and evaluation.

   The field trip offers learners the opportunity to receive sensory input impossible in the classroom. The learner should know in advance the precise goals and evaluation mechanisms of the field trip and should be held accountable for gathering specific information.

   A field trip is an appropriate strategy choice in this instance because the students would witness the use and advantages of the MPI in an actual departmental setting, an experience impossible in the classroom setting.

3. SPECIFIC OBJECTIVES: The student will be able to:

   a. State three advantages of computerized MPI over manual MPI.
   b. Explain (write) how MPI is the basis for any further computerization of the record system.
   c. Identify (chart) the MRA role in the management of system.

4. SPECIFIC FINAL PERFORMANCE: The student will write a description of MPI, using the field trip question sheet as a guideline, and include a flow chart.

5. BACKGROUND OF STUDENTS: Students will have completed one course in computer science and one basic introductory Medical Records course.

6. SPECIFIC INFORMATION TO BE USED IN LESSON:

   a. Description of systems including organization of information, where information is processed, flow of information, and end results
   b. Type of equipment
   c. Description of training process
   d. Description of monitoring and evaluation procedures

7. WHAT IS NEEDED:

   a. Readings on MPI
   b. Institutional information on specific department to be visited
   c. Guidelines for observation of time
   d. Liaison with MR department
   e. Transportation

8. STEP-BY-STEP PROCEDURES:

a. Schedule trip with field supervisor
b. Review with supervisor points to be covered and specific points that relate to the field site
c. Assignments of reading to students
d. Presentation of purpose and operations of MPI of all types (lecture or small group discussion depending on level of class)
e. Assignment of report to be submitted following field trip
f. Arrangement of travel accommodations
    (1) If possible, class will have introductory discussion by field site supervisor.
    (2) Depending on size, the class will be divided into small groups to view operation of master patient index. Remainder of class will observe other areas in the field site.
g. Post-trip debriefing

9. EVALUATION:

a. The instructor can evaluate the content or factual learning through the written responses to the guide sheet questions. Students will undoubtedly evaluate the experience differently, reacting to the interest level of the presentation and their involvement in the trip.

10. COMMENT: The unprepared and un-evaluated field trip is not worth taking.

TEACHING STRATEGY: "BUZZ" GROUPS OR TEAM TASK GROUPS

1. SUBJECT MATTER TOPIC: Interesting and involving the adult learner in an inservice setting. This example reflects the responsibility of the RRA to conduct inservice education.

2. OVERALL PURPOSE: The students will know and understand the factors which influence the adult learner's participation in the inservice or continuing education setting, and the educational philosophies that underly in current approaches to inservice education.

   Buzz-groups or team task groups are small groups (5-7) of learners with a specific task to accomplish, often within a set time. The small groups generally report back in some way or share their product with the larger group. Buzz groups as a strategy can promote a very high degree of learner involvement.

3. SPECIFIC OBJECTIVES: The student will be able to:

   a. -Adopt and orally defend a position in regard to adult learning theory
   b. -Name and describe at least four factors which enhance student/learner participation in the learning situation.

4. SPECIFIC FINAL PERFORMANCE:

   a. -Students will compile and prioritize a list of factors which enhance student participation in the learning process.
   b. -Working in small groups, with class and/or text notes available, students will prepare arguments in favor of their chosen educational philosophy position
   c. -In open discussion, student will question or defend the positions outlined in Laird.

5. BACKGROUND OF STUDENTS: Senior medical records students in a seminar on "The Medical Record Administrator as Inservice Educator".

6. SPECIFIC CONTENT:

   a. Background theory on approaches to adult education as presented in Chapter 9, "How do people Learn" of Laird's Approaches to Training and Development.
   b. Factors enhancing and discouraging adult participation in learning situations such as those presented in:

      (1) Mager, Robert. Developing Attitude Toward Learning. Palo Alto, CA: Fearon-Pitman, 1968, Chapter 7.
      (2) Broadwell, Martin. The Supervisor as Inservice Instructor. Reading, MA: Addison Wesley, 1980, 3rd edition. Chapters 3, 8, and 9.

7. WHAT IS NEEDED:

Text: Approaches to Training and Development, Laird
Chalkboard or newsprint and markers
One class session

8. STEP-BY-STEP PROCEDURES:

a. Pre-class - Instructor assigns Chapter 9 in Laird with the specific request that students be prepared to indicate which of the four approaches presented would be most appropriate underlying training philosophy for Medical Record Department.

b. Class session

(1) Instructor requests that students form four groups of 5 to 6 students each. Two groups are given the task of compiling a list of all the ways they can think of in which an instructor can kill a learner's interest in a class or subject. Two groups are to compile lists of all the ways they can think of that instructors can demonstrate their own interest in a class or subject.

(2) Instructor guides discussion of lists, going over negatives first, leading group to select most discouraging factors in a learning situation. Instructor then guides discussion of positive demonstrations of interest, checking for practicality and priorities.

(3) Instructor requests that each student indicate which of the four approaches in Laird s/he would prefer as a basic philosophy of inservice for a Medical Record Department. Students then regroup according to their choices.

(4) Instructor allows 5 to 10 minutes for each group to:
- choose a recorder
- choose a spokesperson
- work together to marshall arguments in favor of their position

(5) Each spokesperson in turn presents the views of the group. Their aim is to convince students to leave the other groups and join the spokesperson's group. There is no rebuttal at this point.

(6) After all spokespersons have presented their arguments, there is an open discussion. Anyone can argue for or against a position, trying to gain members for their group.

9. EVALUATION: The degree of observed student interaction and involvement in the task is an indication of how well this strategy has involved the students and stimulated their interest in the material. The instructor may want to evaluate learning also, in which case the student could write up his/her position on the question both before the class and once s/he has participated in the buzz groups.

10. COMMENTS: The more the instructor can stay out of the way on this, the better. It can be a situation where the learners do all the interacting.

TEACHING STRATEGY: BRAINSTORMING

1. SUBJECT MATTER TOPIC: Developing a range and variety of possible solutions to a managerial problem. This reflects the responsibilities of the RRA to establish long and short term goals and to solve problems related to policies and procedures. It might also be used by the ART and the RRA in finding ways to meet their responsibilities to maintain quantity and quality standards for departmental work.

2. OVERALL PURPOSE: To demonstrate techniques and value of brainstorming in providing a range of acceptable how-to-do-it suggestions for the implementation of managerial policy or the achievement of departmental goals.

   Brainstorming is a special form of group discussion. It can be a valuable strategy for teaching creativity in problem solving or more basically for teaching participants to suspend negative judgements until a given point in the group process.

   Brainstorming techniques could be extremely effective in dealing with a situation where there is an unpopular or ineffective implementation of departmental policy as seen from the employees perspective. The students can assume the roles of both employer and employee so as not to lose sight of the needs of each group.

3. SPECIFIC INSTRUCTIONAL OBJECTIVES:

   The student will be able to:
   a. -Explain the process of idea getting in brainstorming with its guidelines of quantity and suspended judgement
   b. -Name and describe the steps of idea-sorting, weighing, implementing, and decision making in brainstorming
   c. -Develop a list of specific ideas as possible solutions to a given management problem of policy implementation

4. SPECIFIC FINAL PERFORMANCE: The student will use brainstorming as a problem solving method to identify solutions to managerial problems.

5. BACKGROUND OF STUDENTS: Preferably, students should be about to graduate from a management course. (Clinical experiences dealing with the management role of the ART and the RRA are essential).

6. SPECIFIC INFORMATION TO BE USED IN LESSON:
   a. Steps in the Brainstorming Process.
   b. Problem situation which can be addressed from a "how-to-do-it" approach.

7. WHAT IS NEEDED:
   a. Summary readings on brainstorming process to be read prior to class.
   b. Summary readings on individual need satisfaction or motivation to be read prior to class.

8. STEP-BY-STEP PROCEDURES:

a. Instructor reviews the idea-gathering steps in brainstorming stressing the acceptance of all ideas, the ban on any negative comment or objection to a suggestion.

(1.) Introduction
- (a) Introduce the problem.
- (b) Explain the brainstorming process.

(2.) Idea-Getting
- (a) Emphasize the positive approach by stressing the desire for new and different ideas or ways for improving present conditions.
- (b) Explain four guideposts of brainstorming:
  - (1) The more ideas the better.
  - (2) All ideas are welcomed.
  - (3) Ideas are not criticized during this phase.
  - (4) Hitchhiking on ideas is encouraged.
- (c) Encourage spontaneity.
- (d) Clarify ideas (get them in specific terms), but avoid evaluation.
- (e) Record ideas on the chart pad as submitted.

(3) Idea-sorting
- (a) Work with group to edit and classify ideas in these three broad categories:
  - (1) Sound ideas
  - (2) Ideas to be investigated
  - (3) Ideas to be withdrawn

(4) Idea-weighing--ideally done at a second meeting or group session.
- (a) Select one idea at a time from those ideas classified for further investigation.
- (b) Clarify the idea with the group to make sure everyone has given it the same interpretation.
- (c) Divide the group in half for pro and con analysis of the idea.
  - (1) Instruct one half of the group to argue the merits of the idea (pro).
  - (2) Instruct the other half to argue the disadvantages of the idea (con).
- (d) Set up PRO and CON cards to indicate the side each group is to take.
- (e) Appoint a recorder on each side to list briefly arguments advanced by his side.
- (f) Allow groups to debate idea back and forth across the table.
- (g) Switch cards and sides of groups so everyone will have a chance to speak both for and against the idea.

- (h) Ask recorders on both sides to summarize the pro and con arguments which they have listed.
- (i) Get group opinion as to soundness of the idea.
- (j) Repeat steps above for each idea stated for investigation.

(5) Idea-implementing
- (a) Have group discuss how the idea could be put into practice.
- (b) Develop a specific, detailed proposal showing who does what, how, and when.
- (c) Repeat these steps for each idea which survives the pro and con analysis or which has previously been classified as a "sound idea."

(6) Decision-making
- (a) Decide which idea or combination of ideas best solves the problem.
- (b) Take action.

b. Instructor divides class into groups of ca. 6, and provides easel paper and markers, and presents the one problem all groups are to work on.
c. Groups brainstorming how-to-do-it solutions for 5 to 8 minutes.
d. Class reassembles, places all responses in full view of group
e. Instructor procedes to guide learners through the idea-sorting, weighing, and implementing stages of brainstorming
f. Group reaches a (mock) decision about a solution to the problem.

9. EVALUATION: In this situation, a debriefing or short discussion between instructor and students can bring out feelings of ease or discomfort with the method.

10. COMMENTS: The instructor must be well versed in the material to be presented and must be able to guide groups in their approach to the process, being very careful to encourage innovative suggestions and to guard against negativity.

TEACHING STRATEGY: IN-BASKET TECHNIQUES

1. SUBJECT MATTER TOPIC: Decision Making. This topic reflects the responsibilities of the RRA to supervise departmentmental procedures, solve problems related to policies and procedures. The topic is also related to the responsibility of the RRA to supervise the control, use, and release of health information, and review procedures necessary for collecting and processing health information.

2. OVERALL PURPOSE: To focus the students awareness on the need of a manager to make quick decisions often based on minimal data using the in-basket technique, a form of simulation, as the method of instruction.

   In-Basket may be defined as a form of simulation which enables the student to evaluate and act upon the contents of the "in-basket" on his/her desk working under time constraints with outside assistance or support. In-basket serves as a tool to assess the students analytical and organizational skills and helps to train for decision making and planning, and is often used in pre and post testing situation.

3. SPECIFIC OBJECTIVES: The student will be able to:
   a -Make action decisions on 10 items of typical routine nature. The student will work individually and within a given time frame.
   b -Critique their decisions and discuss (orally) alternative courses of action.

4. SPECIFIC FINAL PERFORMANCE: Given an in-basket containing the typical material contained in a days work, the student must process them into categories for appropriate action within a given period. The student must work alone.

5. BACKGROUND OF STUDENTS: Senior medical records students in an advanced management course. They should have completed some clinical experience which has provided them with the opportunity to observe the kinds of paper problems encountered by the record manager.

6. SPECIFIC CONTENT: Managerial skills such as delegation, in-house communications, planning of meetings.

7. WHAT IS NEEDED:
   a. A carefully designed in-basket content must include items requiring immediate action, others that need to be postponed. The notes, memos, etc. should be carefully put together so that they provide practice for several kinds of managerial skills.
   b. Classroom setting.

8. HOW IT SHOULD BE OPERATED:
   a. Students work separately but on identical items.
   b. Time-in-class sessions with no prior preparation.

282

9. STEP-BY-STEP PROCEDURES:
    a. Teacher prepares in-basket material for distribution to each student.
    b. Teacher gives instruction to student mentioning purpose, time constraints, and need to work individually as material is categorized and acted upon.
    c. At conclusion of session, feedback may be given through whole or subgroup discussion. The instructor may provide major input. In some instances the instructor may elect to collect the "material" and review it individually for each student in writing. S/he may wish to comment on the overall pattern of the class response at the next session.

10. EVALUATION: Instructor will review students results to gauge extent of learning.

11. COMMENTS: The material used in this exercise is complex to prepare. It must contain a range of materials, notes, memo's, letters, etc, that represent an actual "days work", that provide practice in a number of managerial skills.

TEACHING STRATEGY: CASE METHOD TECHNIQUE/ROLE-PLAYING

1. SUBJECT MATTER TOPIC: Evaluation of subordinates performance. This topic reflects the responsibility of the RRA to evaluate the performance of subordinates using established criteria.

2. OVERALL PURPOSE: To increase the awareness of the role that individual and professional values play in carrying out performance evaluation, utilizing case study and role-playing techniques as the method of instruction.

   Case study may be defined as a teaching methodology which includes a case history, an analytical study of the case, and group discussion of the facts, perceptions, and interpersonal dynamics of the situation. A major technique which may be employed in studying the case is role-playing.

   Role-playing, a method by which situations involving personal interactions are presented and then acted out spontaneously.

   These methods would be most appropriate for teaching the affective aspects of management. They give the student an opportunity to practice analyzing situations and identifying problems in communication. They also give students a chance to practice the roles they will be assuming as managers and help them gain insight into the feelings of both employer and employee.

3. SPECIFIC OBJECTIVES: The student will be able to:
   a - State and explain the need to clarify values of the person carrying out the evaluation of employee performance, as well as those of the employee.
   b - Identify the values seemingly in conflict in a given situation.
   c - Identify his/her own personal values (opinions) in relation to the issues identified in the performance evaluation case vignette.
   d - Propose and evaluate solutions to the problems presented in the case.
   e - Apply accepted criteria for job performance.

4. SPECIFIC FINAL PERFORMANCE: Given a case vignette the student will actively join in analysis of the case and will be able to identify causes of conflict, identify personal biases, and apply standards for performance evaluation.

5. BACKGROUND OF STUDENTS: Senior medical record students in an advanced management course. They should have completed several clinical experiences which have given them the opportunity to observe the record administrator in a management role, or have completed a values clarification lesson seminar.

6. SPECIFIC INFORMATION TO BE USED IN LESSON:
   a. Role of values identification in developing management style.

b. Steps in the process of value identification
c. Standards for employee performance
d. Case

7. WHAT IS NEEDED:
   a. Summary readings on value clarifications to read prior to the class.
   b. Case study to be read prior to the class.
   c. Classroom setting

8. HOW IT SHOULD BE OPERATED:
   a. Small groups. If class is large, subdivide into small groups.
   b. Time - 1 class session, with prior preparation

9. PROCEDURES:
   a. Review values clarification.
   b. Review material on job performance.
   c. Instructor guides students in discussion and analysis of case.
   d. Class discussion in small group (6-8). Should be focused, move quickly, and cover all major issues. Leader may be teacher or student.
   e. Instructor may combine role-playing with discussion at any point in session.
   f. Students in small groups will report summaries of cases.

10. COMMENT: The instructor using the method must be carefully prepared. S/he must know the material and be able to anticipate probable student response. S/he must be committed to democratic student focused type of classroom interaction.

11. OTHER USES FOR ROLE-PLAYING: It is useful for the ART in focusing on his/her responsibility to instruct employees regarding their responsibilities. It would also be helpful for the RRA in conducting inservice training programs.

TEACHING STRATEGY: CONTRACT/SELF-DIRECTED INSTRUCTION

1. SUBJECT MATTER TOPIC: Planning and conducting effective organizational meetings. This topic reflects the responsibility of the RRA to organize and conduct inservice training programs. Their responsibilities may be carried out through the ability to plan and conduct a meeting. This is a means by which the RRA could contribute to the formulation of hospital policies regarding content of health records, or point out to staff, policies for the control, use, and release of health information.

2. OVERALL PURPOSE: Students will know and be able to apply the following concepts in the planning/conducting of a brief informational meeting:

   a. types and functions of organizational meetings.
   b. components of agenda.
   c. implications of meeting site or environment.
   d. roles and responsibilities of committee members.
   e. roles and responsibilities of committee chairman.
   f. importance of minutes and proceedings.
   g. advantages and disadvantages of committee structure.

   Contracted or self-directed learning is a process in which students, with varying degrees of guidance from faculty, take the initiative in:

   a. diagnosing their learning needs,
   b. formulating learning goals,
   c. choosing and implementing appropriate learning strategies, and
   d. evaluating learning outcomes.

   Even very bright and creative students may have difficulty with this approach unless they are introduced to it gradually and presented with (decreasing) structural guidelines. Self-directed contract learning is appropriate when

   a. students bring a range of experience and ability to a topic.
   b. students are near graduation and will soon be fully responsible for their own continuing professional education.

3. SPECIFIC OBJECTIVES:
   The student will be able to:

   a. define and explain in detail the purposes and appropriate uses of the informational, advisory, and problem solving meeting.
   b. design an agenda for an informational meeting in a health care setting.
   c. explain (draw and label) at least four different meeting seating plans and the type of meeting communication they en-(dis) courage.
   d. explain the task roles and functions of a committee member, a committee chairman.

e. explain and give examples of four task and four function roles of a small group member.
f. attend a committee meeting and describe how these roles were actually carried out.
g. analyze the advantages and disadvantages of the committee structure within a hopsital or other complex health care setting.
h. keep and prepare the final draft of minutes from a brief informational meeting.
i. plan and conduct or participate in a brief (15-30 min) informational or advisory meeting.

4. SPECIFIC FINAL PERFORMANCE: Students will contract with the instructor as to how and when they will demonstrate their acquisition of the knowledges and skills listed in the specific instructional objectives.

5. BACKGROUND OF STUDENTS: Senior medical record administration students in an "Organization and Management" course.

6. SUBJECT CONTENT:

   a. types and functions of organizational meetings.
   b. standards for effective agenda, meeting planning, chairmanship, membership.
   c. function and task roles in small group meetings,
   d. aspects of committee function within complex health care organizations.

7. WHAT IS NEEDED: Bibliography, course syllabus, list of references coordinated with objectives, contract sheets, three to six weeks and a healthy degree of individual flexibility.

8. STEP-BY-STEP PROCEDURES:

   a. Instructor gives "syllabus" of this (section of) course, including
      (1) list of objectives
      (2) list of references (Attachment A)
      (3) list of "inquiry units", i.e., the kind of questions with which this unit deals. This may be set up as a self-assessment instrument. (Attachment B)
   b. Instructor and students discuss objectives, skill level definitions, and sample questions on self-assessment instrument.
   c. Instructor allows time for students to scan references, talk with experienced people, assess personal experience and skills (4 to 8 days)
   d. Instructor provides a contract form (Attachment C)
      (1) guides students in formulating objectives, listing previous accomplishments.
      (2) guides students in listing possible learning strategies (Brainstorming would be helpful.)

    (3) guides students in selecting strategies
    (4) guides students in clarifying (or setting) evaluative criteria.

  e. Instructor allows students time to review and revise contracts in peer groups and conducts larger group debriefing of contracting process.
  f. Students carry out contracts (with or without class meetings, structured sessions, as instructor and group decide).
  g. Students revise and/or renegotiate contracts, as experienced proves necessary.
  h. Students present completed contract material to instructor in agreed format on agreed date.

9. EVALUATION:

  a. Evaluation of the contract *product* is done according to the criteria agreed upon by instructor and student(s).
  b. Evaluation of the contract *process* can be done during and after the fact by instructor and group in written or discussion format.

10. COMMENTS: The contract strategy can be extraordinarily rewarding to both the instructor and the student. It can also be extraordinarily demanding on both of them. It should not be used casually, for it requires painstaking planning and follow through.

11. OTHER USES FOR CONTRACT LEARNING: This method could be utilized to prepare the MRA student to meet such responsibilities as, develop policies for departmental functions, write job descriptions for departmental positions, prepare administrative and statistical reports, and prepare forms and reports relating to patient care evaluation.

    If some variant of this approach were utilized by MRT students it could be used to have them prepare administrative and statistical clinical reports, respond to requests for health information, or revise or update job descriptions.

ATTACHMENT A

REFERENCES FOR CONTRACT UNIT ON PLANNING AND CONDUCTING EFFECTIVE MEETINGS

In conjunction with unit objective:	
a,b,d	1. Doyle, M., and Strauss, D. How to Make Meetings Work. New York: Playboy Paperbacks, 1977.
d,h	2. Gilette Company. "The Manager's Guide to Successful Meetings." Training and Development Journal (October 1978).
b,c,d,h	3. Hoyt, John. Personal Time Management. St. Paul, MN: Telstar Productions, 1980.
a,b,d	4. Kirkpatrick, Donald L. How to Plan and Conduct Effective Business Meetings. 1976.
c (Ch 12)	5. Laird, Dugan. Approaches to Training and Development. Reading, MA: Addison Wesley, 1978.
d,h,g (Ch 12)	6. Liebler, Joan G. Managing Health Records. Germantown, MD: Aspen Systems, 1980.
a,e,g	7. Longenecker, Justin G. Management. 5th ed. Columbus, OH: Charles E. Merrill Co., 1981.
c (pp. 268-76)	8. Pallon, B.R., and Griffen, K. Interpersonal Communication in Action. New York: Harper & Row, 1981.
b,c,d,e,h	9. Reith, Jack. "Group Methods: Conferences, Meetings, Workshops, Seminars." In Training and Development Handbook, edited by Robert L. Craig. Madison, WI: American Society of Training and Development, 1976.
e (pp. 114-15)	10. Rosenfeld, Lawrence. Human Interaction in the Small Group Setting. Columbus, OH: Charles E. Merrill Co., 1973.

ATTACHMENT B

SELF-ASSESSMENT AND PLANNING INSTRUMENT

LEARNING OBJECTIVE	MY PRESENT KNOWLEDGE/ ABILITY/SKILL LEVEL				QUESTIONS I WOULD NEED TO INQUIRE INTO:
	None	Weak	Fair	Strong	
a. Define and explain in detail the purposes and appropriate uses of informational, advisory, and problem solving meetings.					
b. Design an agenda for an informational meeting in a health care setting.					
* * * * * *					
c. Keep and prepare the final draft of minutes from a brief (15-30 min.) informational meeting.					
d. Plan and conduct (or participate in) a brief informational or advisory meeting.					

ATTACHMENT C

LEARNING CONTRACT

Name: Pat Moore

Topic: Planning and conducting effective organizational meetings

Learning Objective	Learning resources and strategies	Evidence of accomplishment	Criteria and means of validating evidence
A. Define and explain in detail the purpose and appropriate uses of informational, advisory, and problem solving meetings.	1. Read and collate information from . Doyle & Straus . Kirkpatrick . Longenecker 2. Compile glossary of types of meetings, detailing purposes and appropriate uses. 3. Consult with at least three middle-management level hospital executives as to reality of glossary definitions and stated descriptions. 4. Revise glossary as necessary.	Written revised glossary of definitions and descriptions.	Glossary submitted to at least three peers who have done a similar project. Group reviews each glossary and corroborates or challenges definitions or descriptions.

SUMMARY

This chapter describes a range of teaching strategies which the instructor can use to develop courses and lessons in medical record education. We have briefly defined the major strategies, identified the theoretical aspects involved in their development, discussed the process of appropriate strategy selection, and given examples of their use in medical record curriculum. We have provided examples of references, a self assessment and planning instrument, and a learning contract (Attachments A, B, C). An annotated bibliography on teaching strategies is provided.

ANNOTATED BIBLIOGRAPHY - CHAPTER 6

Anderson, Ronald H. Selecting and Developing Media for Instruction. New York: Van Nostrand and Reinhold, 1976.

Anderson is a recognized expert in this field and his is the standard handbook.

Bell, D.F.; Mooney, R.T.; and Bell, D.L. "Teaching the Part-Time Student in the Health Professions." Cross-Reference on Human Resource Management (American Hospital Association) 2(March-April 1981): 6-9.

This article distinguishes quite clearly among several approaches to self-directed learning.

Bergevin, Paul, et al. Adult Education Procedures: A Handbook of Tested Patterns for Effective Participation. New York: Seabury Press, 1963.

A clear, helpful "recipe" book. Outlines and explains in detail the most commonly used instructional strategies.

Broadwell, Martin. The Supervisor as Instructor: A Guide for Classroom Training. 3d ed. Reading, MA: Addison Wesley, 1978.

This is a down-to-earth approach to classroom inservice. The chapters on the teaching/learning process, on student involvement, and on classroom techniques are especially helpful (chapters 2, 3, 9, 10, and 14).

Craig, Robert L., ed. Training and Development Handbook: A Guide to Human Resource Development. 2d ed. New York: McGraw-Hill, 1970.

This book is sponsored by the American Society of Training and Development. It amounts to a mini-encyclopedia on program development and implementation.

Davis, Larry Nolan, and McCollon, Earl. Planning, Conducting and Evaluating Workshops. Austin: Learning Concepts, 1974.

A clear how-to book.

Garry, William, et al. A Checklist for Technical Skills and Other Training. Madison, WI: American Society of Training and Development, n.d.

Developed for the U.S. Navy, this publication gives a detailed, step-by-step guide to developing strategies and planning curricula. It is exactly what its title announces: a very long checklist.

Green, Lawrence W., et al. Health Education Planning: A Diagnostic Approach. Palo Alto, CA: Mayfield Publishing Co., 1978.

Mainly a text for health educators, this text provides very useful criteria for instructional strategy choice. A scholarly, research-based approach.

Houle, Cyril O. *Continuing Learning in the Professions*. San Francisco: Jossey-Bass, 1980.

One of the best theory books in the field. Chapter 7 is especially good for the theory underlying continuing education for professionals. *Not* a "recipe" book.

Knowles, Malcolm. *Self-Directed Learning: A Guide for Learners and Teachers*. Chicago: Follett, 1975.

A short, useful guide to contract learning.

Knowles, Malcolm. *The Adult Learner: A Neglected Species*. Houston: Gulf, 1973.

A very handy compilation of adult education theory. Chapter 5 pulls most of andragogical thinking together in one place.

Laird, Dugan. *Approaches to Training and Development*. Reading, MA: Addison Wesley, 1978.

Written for the professional trainer, this text contains valuable sections on learning theory, techniques, and settings. Easy to read; very practical. Chapter 10 contains an extensive survey of learning strategies.

Mager, Robert F. *Preparing Instructional Objectives*. 2d ed. Belmont, CA: Fearon-Pitman Publishers, Inc., 1975.

The book to begin with if you have somehow missed it. Should be read through at least once a year.

McGuire, Christine H., et al. *Construction and Use of Written Simulations*. New York: Harcourt Brace, 1976.

A highly specialized approach to the planning of written simulations. Remarkably clear; very time consuming.

McLagan, Patricia. *Helping Others Learn: Designing Programs for Adults*. Reading, MA: Addison Wesley, 1978.

McLagan has planned this workbook as a self-paced guide to program development. She presents a clear, step-by-step method of program design. The value of this book lies in the fact that McLagan has taken adult learning theory and shown exactly how it can be implemented.

Michalak, Donald, and Yager, Edward. Making the Training Process Work. New York: Harper and Row, 1980.

This is a clear, no-nonsense book on the design of training programs. The authors stress non-technical and interpersonal skills training in this very practical guide.

Pfeiffer, J. William, and Jones, John E. Handbook for Group Facilitators and Structured Experiences. La Jolla, CA: University Associates Press, 1972.

A compilation of all types of group methods and exercises. Very useful as a shelf reference.

Pigors, Paul. "Case Method." In Training and Development Handbook, edited by Robert L. Craig. New York: McGraw-Hill, 1976.

Pigors traces the history of the case method and of the "incident process," which he developed.

Renner, Peter F. The Instructor's Survival Kit. Vancouver, B.C.: Training Associates, Ltd., 1980.

An absolute gem: get it.

Segall, Ascher J., et al. Systematic Course Design for the Health Fields. New York: John Wiley and Sons, 1975.

If you're into systems design, this is your book. Excruciatingly detailed.

Wolhking, Wallace. "Role Playing." In Training and Development Handbook, edited by Robert L. Craig. New York: McGraw-Hill, 1976.

Wolhking presents a detailed description of why, when, and how to use role plays.

Chapter 7

Evaluation

SCOPE OF CHAPTER

Educational evaluation is a complex subject which has specialized areas, each of which require an entire textbook for full treatment. The reader needs to be aware that in this chapter, discussions of any evaluation concept, or mechanism, are limited. The chapter is written to provide a broad understanding which will assist educators to initially feel more confident in their roles as evaluators, and most importantly to direct them to topics and resources for their own investigation and continuing development.

INTRODUCTION

Evaluation has become an increasingly prevalent activity in American society. Whereas employees have always been accountable to their employers, and students to their teachers, reciprocal accountability and, therefore, evaluation has emerged in new directions. Managers are evaluated by employees; teachers are evaluated by students; and recently, as evidenced in some unusual court proceedings, parents are evaluated by children. Educational evaluation has changed considerably during this entire movement, and the literature has become large and specialized. The underlying premise of this chapter is that the majority of medical record educators enter teaching without formal experience which teaches them to be educators (and evaluators of education), but with substantial experience in medical record practice. Furthermore, it is assumed that the majority of persons entering the field of medical record education have been educated under traditional methods which rely primarily on didactic instruction and which consider evaluation as a mechanism for selecting out those learners who fall in some pre-defined lower percentile of a given class of peers. Unless the novice educator has come to medical record education via an atypical route, s/he has very little choice but to "teach as s/he was taught", and to perceive evaluation as s/he has experienced traditional testing. In addition to offering examples of evaluation methods, this chapter will provide the new educator with a philosophy of the purpose of educational evaluation, an understanding of evaluation as a component of the educational process, methods of evaluating performance relative to established educational objectives, and specific information on test construction. A glossary of terms is provided, and an annotated bibliography is presented.

EVALUATION

Webster's Third New International dictionary defines "evaluate" as, "to examine and judge concerning the worth, quality, significance, amount, degree, or condition". Traditional public school educational evaluation has centered its efforts on examining student performance and judging the "worth" of the student to enter subsequent stages of education. This narrow perspective has been found to be ineffective and undesirable for the individuals who are evaluated thusly as well as for a society whose needs for educated manpower continue to increase. Over the past decade, the *purpose of educational evaluation has shifted from one of eliminating some learners from the process to one of improving teaching and learning.* In order to evaluate for the purpose of improving teaching and learning, i.e. improving the educational process, one must determine and clarify the general goal of education. This chapter subscribes to the belief that the *goal of any educational experience is to produce desirable changes in learners*. From this goal of education, the following definition of evaluation is logically derived.

> EVALUATION IS THE SYSTEMATIC COLLECTION OF EVIDENCE TO DETERMINE WHETHER IN FACT CERTAIN CHANGES ARE TAKING PLACE IN LEARNERS AS WELL AS TO DETERMINE THE AMOUNT OR DEGREE OF CHANGE IN INDIVIDUAL STUDENTS. (Bloom, et al, 1981).

The evidence gained through this process is used to improve curriculum structure; to improve teaching, and to improve learning; not to eliminate students from the educational process. The literature on educational evaluation is specialized according to whether the objective is directed toward improvement of curriculum structure (programmatic evaluation); teaching (faculty evaluation); or learning (student evaluation, or the evaluation of student outcome).

The strategies and tools discussed in this chapter are limited to the objective of evaluating student outcomes. It is this objective that immediately faces the new educator. Furthermore, effective evaluation of student outcomes is basic to the evaluation of programs and of faculty. A discussion of curriculum evaluation, with examples is presented in Chapter 1.

EVALUATION AND EDUCATIONAL OBJECTIVES

Other chapters in this document deal exclusively with the steps in the instructional process. It is appropriate to summarize the process in order to place the role of evaluation in its proper context and to emphasize the necessity for evaluation decisions to reflect those made at all other stages. Indeed, evaluation decisions must be made concurrently with the other choices.

In a competency-based curriculum, general statements which describe those characteristics which the program sets as behavioral goals for graduates (COMPETENCY STATEMENTS) guide all instructional decisions. The design of the curriculum and the decisions regarding course content and packaging are all directed toward developing these characteristics. Because the competency statements are in general, global terms, further specification is necessary to identify the behavior which is observable in students who have obtained the desired characteristics. It is only through this refinement that course content can be identified and that evaluation of student outcomes can be accomplished.

The educational literature is confusing in the varieties of hierarchies available, each with its own terminology and specificity. The following is an attempt to clarify and to show the increasing degree of specificity inherent in the behavioral statements. Definitions of these terms are provided in Chapter 1.

TERM	DEGREE OF SPECIFICITY
COMPETENCY STATEMENTS	Global, longterm behavior Outcomes of the entire educational process. (Program Objectives)
TERMINAL OBJECTIVES (GENERAL INSTRUCTIONAL OBJECTIVES)	First level of concrete specification. These statements describe behavior of students after the completion of a major division of instruction. (Course Objectives)
ENABLING OBJECTIVES (LEARNING OUTCOMES)	Second level of concrete specification. These statements describe behaviors we accept as evidence that students have mastered the knowledge and skills which are prerequisite for reaching terminal objectives. ("Within Course" Objectives)

Chapter 4 gives details regarding the procedure for writing objectives with examples applicable to medical record education. The examples in this Chapter are presented to show the interaction between objectives and evaluation mechanisms.

The American Medical Record Association has published competency statements for entry-level medical record administrators, one of which is as follows (AMRA, 1981).

> COMPETENCY STATEMENT:
>
> "To perform the following management functions as they relate to a health record system: facility design, financial planning, budgetary control, selection of equipment and supplies, systems analysis and evaluation of the effectiveness of departmental services."

The following course objective is one, of many, defined to express behavior which is apparent in a graduate who attains the competency listed above.

TERMINAL OBJECTIVE:

At the conclusion of the course, the student will be able to design the use of a given space for a typical medical record department and represent the design with a floor plan.

The course objective listed above is further specified to identify a sample of behaviors at more concrete levels, which indicates that a student is capable of meeting the course objective. One enabling objective appropriate for this terminal objective is as follows.

ENABLING OBJECTIVE:

Given dimensions in feet, the student can convert to scale using conversions of 1'=1/4" and 1'=1/8".

With the terminal objectives and the enabling objectives established, the instructor selects teaching materials and instructional strategies; and plans learning activities and evaluation techniques. The specificity of the objectives directly guides evaluation decisions. Evaluation techniques must be those which provide the best opportunity for students to exhibit the desired behavior expressed in the objective. Typically, several evaluation methods must be used to appraise all of the intended behaviors expressed in a terminal objective. Appendix 7-1 provides a description of mechanisms and methods of evaluation. The following grid exhibits one terminal objective for a course in medical terminology with several accompanying enabling objectives, and identifies the methods which would be appropriate for evaluating student outcomes.

Example: Objectives and Choice of Evaluation Method(s) Grid
Course: Medical Terminology

Behavioral Objectives	Evaluation Methods					
	Objective Test	Performance Test	Essay Test	Term Paper	Observation	Oral Report
TERMINAL OBJECTIVE: 1. At the conclusion of the course, students understand the meanings of medical terms.	X	X	X	X	X	X
ENABLING OBJECTIVES: 1.1 Given a sample of terms, the student can use each in an original sentence with 85% accuracy.			X	X		X
1.2 Given paired terms, the student can identify their similarities and their differences with 85% accuracy.	X		X			
1.3 Given a paragraph from a medical report, the student can identify terms which are used incorrectly with 100% accuracy.	X	X				
TERMINAL OBJECTIVE: 2. At the conclusion of the course, the student can communicate with others.		X	X	X	X	X
ENABLING OBJECTIVES: 2.1 Given a sample of medical terms, the student can correctly pronounce each.					X	X
2.2 Given a sample of medical terms, the student can spell each correctly.	X		X	X		
2.3 Given a sample of medical terms, the student can use the correct word form with 90% accuracy.	X		X	X	X	X

A grid of this type is useful during course planning. It is made as the objectives are established and therefore assists in assuring that evaluation methods are selected in correlation with the behavioral objectives.

FORMATIVE AND SUMMATIVE EVALUATION

Traditional evaluation reflected an acceptance of the belief that in any population of learners, the outcomes of instruction would be distributed according to the innate abilities of the learners, which approximate a bell-shaped ("normal") curve. During the 1960's, research began to show that mastery of learning tasks is available to a majority of students if they are given enough time and help in reaching mastery. The mastery learning philosophy is basic to, and a component of,a competency-based curriculum. When instruction is delivered under the philosophy of "mastery learning", intermediate evaluation, that is, Formative Evaluation becomes very significant.

> FORMATIVE EVALUATION - THE COLLECTION OF APPROPRIATE EVIDENCE *DURING THE INSTRUCTIONAL PROCESS* TO PROVIDE FEEDBACK TO BOTH TEACHERS AND STUDENTS, NOT FOR GRADING PURPOSES, BUT TO IDENTIFY THOSE STUDENTS WHO NEED ADDITIONAL RESOURCES, INCLUDING TIME, TO ACHIEVE MASTERY (Bloom, et al, 1981).

Formative Evaluation, as distinguished from Summative Evaluation, is undertaken to identify any problems students are having in gaining the pre-requisite knowledges, skills, and affect for mastering the terminal objectives established for the course. The information is used to identify and implement appropriate action which will assist the student in acquiring the necessary characteristics. Most of us are familiar with Summative Evaluation.

> SUMMATIVE EVALUATION - THE COLLECTION OF EVIDENCE *AT THE END OF A COURSE OF UNIT OF INSTRUCTION* TO CERTIFY MASTERY OF INSTRUCTIONAL OBJECTIVES AND/OR TO ASSIGN GRADES (Bloom, et al, 1981).

It is through this mechanism that conclusions are reached which are used to make decisions about individuals or groups of students and which result in course grades. There are other differences between the two. Formative Evaluations are conducted more frequently. A period of time cannot be defined since such evaluation is appropriate after the presentation of new material. This could occur several times over an academic quarter. Summative Evaluation is appropriate at the midpoint and at the end of the quarter. The levels of generalization of the two evaluations also distinguish them. Summative Evaluation tests for a combination of skills, knowledge, and affect; while Formative Evaluation tests for the development of discrete skills, knowledge, and affect which the student must obtain to perform at mastery level on the Summative Evaluation.

The competency relating to facility design, with an accompanying terminal objective and a sample enabling objective, is repeated to exemplify the difference.

COMPETENCY

To perform the following management functions as they relate to a record system: facility design, financial planning, budgetary control, selection of equipment and supplies, systems analysis and evaluation of the effectiveness of departmental services.

TERMINAL OBJECTIVE:

At the conclusion of the course, the student will be able to design the use of a given space for a typical medical record department, and represent the design with a floor plan.

ENABLING OBJECTIVE:

Given dimensions in feet, the student can convert to scale using conversions of 1'=1/4" and 1'=1/8".

The terminal objective includes a variety of skills and knowledges which the student must master. For the purposes of Summative Evaluation, Performance Testing, using the assignment of a space design project is appropriate. The enabling objective expresses a pre-requisite skill that the student must acquire in order to reach the terminal objective. The following multiple-choice item would be useful for Formative Evaluation.

EXAMPLE: The file room of a medical record department measures 16' x 48'. In diagramming this area, using a 1'=1/8" scale, the dimensions would be

a. 8" x 1"
b. 2" x 6"
c. 6" x 4"
d. 6" x 2"

The evaluation mechanisms used in Formative Evaluation and Summative Evaluation are identical. The instructor selects the mechanism on the basis of its ability to provide the most direct opportunity for the student to show s/he has mastered the pre-requisite behavior(s).

In the Mastery Learning Model, the student who performs below some pre-established criterion (such as 80% accuracy) on a Formative Evaluation, is provided with additional resources, and re-evaluated. The re-evaluation uses parallel questions to those missed and usually does not test for continued mastery of information or abilities the student exhibited on the original evaluation. The results of Formative Evaluation are not used for grading purposes. They are used to provide feedback to the *student and to the instructor in order that appropriate action can be taken by each to assure mastery*.

DIAGNOSTIC EVALUATION

Courses are designed under the assumption that the students entering them possess some basic level of knowledge, skill, and affect obtained previously. *Diagnostic Evaluation* (Pre-testing) *assesses the degree to which the students entering a course actually possess that knowledge, skill, and affect they need to perform in the course*. Some students will be found to be beyond the level which the instructor expects; others will not possess those attributes that are presumed to be already developed. Diagnostic evaluation is undertaken for the purpose of identifying problems and taking remedial action and therefore can be viewed similarly to Formative Evaluation.

EXAMPLE: DIAGNOSTIC EVALUATION

Instructional Units in Hospital Statistics are typically designed under the assumption that all students beginning the unit possess basic skills in arithmetic. A pretest in arithmetic, given prior to the presentation of the unit, serves to identify students with problems so that appropriate additional assistance can be provided. Should a majority of the students exhibit problems, the course plan would be revised to include arithmetic review, as an introduction.

Since the delineation of affective characteristics for medical record practitioners is new, preassessment of these has likely been implicit, if considered at all. Aids such as the "Helping Professions Inventory" are available in a text entitled, *Activities and Exercises for Affective Education*, authored by Lou Thayer and Kent Beeler.

TAXONOMY DOMAIN AND EVALUATION

Chapter 4 classifies instructional objectives according to the three domains: cognitive, affective, and psychomotor. The hierarchy of behaviors which occurs within each domain is also described. The evaluation method must be capable of assessing behavior according to the domain expressed by the objective, and it must test for the appropriate level of behavior within the domain.

EXAMPLE: DOMAIN AND EVALUATION

TERMINAL OBJECTIVE:

At the conclusion of the course, the student will be able to design the use of a given space for a typical medical record department, and represent the design with a floor plan.

This terminal objective overlaps the cognitive and psychomotor domains. The evaluation mechanism(s) used must appraise both types of behavior.

Also the desired behavior is at a relatively high level within the cognitive hierarchy since the cognitive ability necessary to design space goes far beyond that of simple recall. An item which tests, for example, for knowledge of the recommended width of major and minor aisles in a file room is inappropriate. *An important principle in evaluation relative to performance levels is that the mastery of a given level of performance within a hierarchy implies the mastery of all preceding levels of performance*. The above objective would best be evaluated with a Performance Test which results in students using all levels of cognitive ability necessary to meet set standards, and being sufficient in psychomotor ability to represent the space design decisions in an acceptable diagram. The lower level cognitive abilities would not be evaluated directly or separately. Their evaluation would already have occurred, when assessing enabling objectives.

Essentially all of the evaluation mechanisms can be used to assess mastery of objectives in the cognitive domain. Objective Tests are most frequently used because of their lack of subjectivity. Care must be taken in item writing, however, in the assessment of objectives at the higher levels of this domain. Without such care, the tendency is to test for a level of cognition which is lower than that expressed in the objective. A section on constructing classroom achievement tests is provided in Appendix 7-2. In addition to giving examples which serve to improve the instructor's item-writing ability generally, this section gives examples which test each of the levels in the cognitive domain.

Even though Objective Tests are capable of measuring a wide variety of cognitive outcomes, complex achievement such as the ability to organize, integrate, relate and evaluate may require additional methods. The Essay Test allows the student freedom of expression and thus, though necessarily subjective, enhances the evaluator's opportunity to assess the higher cognitive abilities. The freedom of expression allowed the student need not be total. The content may be limited by restricting the scope of the topic. The response may be limited by use of a question or by basing questions on specific problems (Gronlund, 1976).

EXAMPLE: RESTRICTED RESPONSE ESSAY QUESTION

TERMINAL OBJECTIVE:

Given information on the size and type of a health care facility, the student can select and justify an efficient system for maintaining medical records.

ESSAY QUESTION:

Community Memorial Hospital is an acute facility with 100 beds. Emergency care is rendered, but there is no other form of ambulatory care available. The hospital is located in a small town which has a stable population. Readmission rates are relatively high since the hospital provides "cradle to grave" care for the town's residents.

1. Discuss the options available for filing medical records and recommend, with justification, the option of choice for this facility.

The extended response essay question provides the student with latitude in selecting the information needed to organize his response.

EXAMPLE: EXTENDED RESPONSE ESSAY QUESTION

TERMINAL OBJECTIVE:

Given information on the size and type of a health care facility, the student can select and justify an efficient system for maintaining medical records.

ESSAY QUESTION:

1. Compare the straight filing and terminal digit filing systems in terms of their advantages and disadvantages. Give specific illustrations.

Objectives in the psychomotor domain are evaluated by using Observation Techniques and Performance Tests. Observation requires careful documentation of student behavior. One method of guiding the observation toward objective assessment and of documenting findings is the use of a checklist. Checklists are very suitable for the evaluation of psychomotor skill since they record the frequency and/or order of behavior.

EXAMPLE: CHECKLIST FOR PSYCHOMOTOR OBJECTIVE

ENABLING OBJECTIVE:

The student can efficiently retrieve bulk requests for medical records.

ACTIONS	SEQUENCE OF STUDENT ACTIONS
1. Places requests in terminal digit order.	3
2. Separates requests which do not have hospital numbers.	1
3. Looks up hospital numbers and enters on requests.	2
4. Obtains rolling cart and goes to file area.	4
5. Pulls records.	5
6. Assures name on request and that on record are the same.	6
7. Files request in outguide.	7
8. Places record on cart.	8

The objectives which fall within the affective domain are the most difficult to evaluate because these incorporate attitudes, values, etc. The behavior which can be observed may reflect the inculcation of a value, e.g., ethics, or it may reflect only that the student under observation knows what behavior is expected and acts accordingly.

The affective action statement which ranked the highest among those responding to the AMRA Questionnaire (see Chapter 3) was "Knows how to establish priorities", representing "Decisiveness and Perception" as affective characteristics.

An appropriate terminal objective which would express this affective characteristic, through the action statement, is as follows.

EXAMPLE: TERMINAL OBJECTIVE, AFFECTIVE DOMAIN

Upon completion of the course, the student will be able to determine priority actions from a list of competing activities.

The "In-Basket Exercise" is a simulation device which requires students to allocate their attention (under conditions of scarce resources, primarily time) to a composite of competing events (phone calls, memos, deadlines, etc.). It is appropriate as a learning activity, and as an evaluation technique. The student may "master" the level of knowledge necessary to correctly select those activities which (according to the instructor, and other experts), require immediate attention, and to appropriately allocate others to a lower priority. Our hope, as educators, is that in the student's day-to-day operation, this decisiveness is exhibited with professional goals and responsibilities heading the priority list. It is difficult to identify, through evaluation, the student who in the future would select attending the once a year sale at a local department store during lunch, even though the needs of the department demand his or her presence. Values and attitudes are internal, and may be best observed under unobstrusive conditions, i.e. conditions such that the person being observed is not aware that an evaluation is underway. Anecdotal Records can be used to this end. Anecdotal records are factual descriptions of the meaningful incidents and events which the instructor has observed. The incident observed is described by the observer, including only the facts. The instructor then makes conclusions from the facts and writes up an interpretation of what was observed, including both positive and negative implications.

EXAMPLE: ANECDOTAL RECORD

Course: Directed Practice IV Student: Margaret Taylor

Date: 1/25/81 Student Assignment: Automated Master Patient Index

Incident: During her initial practice period on the MPI, Margaret was left to work alone during the MPI clerk's afternoon break. She had 50 record requests with erroneous hospital numbers to correct and she was also to supply numbers or assign new numbers when telephoned by registration points in the hospital. She worked rapidly to find correct numbers for the requests. After several minutes, a number of calls came through from the Admitting Office to obtain numbers for afternoon admissions. Margaret told the Admitting Office clerk she would have to call back later when the MPI clerk returned. She then finished supplying correct numbers for the record requests.

Interpretation: Margaret was careful and diligent in locating correct hospital numbers for record requests. She appeared frustrated by having to put this aside to address the higher priority of assigning hospital numbers to Admissions. Her ability to put routine work aside to handle priority interruptions needs discussion and additional practice.

The major advantage of using Anecdotal Records is that they describe student behavior under natural and spontaneous circumstances. The major disadvantage in using them is the degree of subjectivity which enters the interpretation. They should be used only when other evaluation methods cannot provide the needed information, and interpretations must be carefully made. King emphasizes that the subjectivity inherent in this method mandates the destruction of Anecdotal Records at the end of the academic quarter or semester (King, unpublished monograph).

The effectiveness of Anecdotal Records can be optimized by following the guidelines listed below. (Bloom, et al, 1981).

1. Determine in advance what to observe, but be alert for unusual behavior.

2. Observe and record enough of the situation to make the behavior meaningful.

3. Make a record of the incident as soon after the observation as possible.

4. Limit each anecdote to a brief description of a single specific incident.

5. Keep the factual description of the incident and your interpretation of it separate.

6. Record both positive and negative behavioral incidents.

7. Collect a number of anecdotes on a student before drawing inferences about behavior.

8. Obtain practice in writing anecdotal records.

Rating Scales and Checklists provide more structured ways of recording observations of student behaviors. A Rating Scale indicates the degree to which desirable behavior is present. Like all evaluation mechanisms, these must be developed to reflect the educational objectives.

EXAMPLE: NUMERICAL RATING SCALE

TERMINAL OBJECTIVE:

Given sample requests for medical information, the student is able to determine what information to release and develops an appropriate response to the requestor.

	Never 1	2	3	4	Always 5
1. The student identifies situations which need authorization.					
2. The student releases only the information requested.					
3. The student composes an appropriate cover letter to submit with information released.					
4. The student composes an appropriate letter to request authorization.					

The above example is a Numerical Rating Scale. Graphic Rating Scales are used similarly. In a Graphic Rating Scale the responses show along a continuum, but the rater is free to indicate behavior which occurs between responses.

EXAMPLE: GRAPHIC RATING SCALE

TERMINAL OBJECTIVE:

The student can work effectively as a member of a group.

1. To what extent did the student contribute effectively to the group planning effort?	The student spoke only in response to questions.	The student entered discussion to ask questions.	The student suggested ideas.

In addition to the use of Observation Techniques, some Affective characteristics may be assessed through scales devised for measuring attitudes. King discusses and provides examples of the use of Likert, Thurstone, and Gutman Scales, and the Semantic Differential (King, Unpublished material).

INTERPRETING EVALUATION RESULTS

Broadly, there are two ways to interpret the results of evaluation. If the student's performance is described in terms of his or her position relative to the class (or some other peer group), the interpretation is Norm-Referenced. If the student's performance is interpreted relative to his or her behavior as compared with the behavior which is defined as desired (required), the interpretation is Criterion-Referenced. While both types of interpretation are useful, criterion-referenced evaluation is a logical component under the mastery learning philosophy of a competency-based curriculum. Test design for norm-referenced interpretation includes the step of selecting and including items which will provide a wide range of scores, and the frequency of items which all students can answer correctly is minimized. Item selection for criterion-referenced interpretation is directed toward assuring that the test items reflect the established behavorial objectives, and the difficulty of the item is selected according to the complexity of the objective.

In considering test results, the concepts of *Validity* and *Reliability* are crucial. *Validity* refers to *the degree to which the inferences that are made from test results are, in fact, appropriate.* According to Gronlund (1976), validity is the most important consideration in the selection and construction of evaluation procedures. He enumerates the following areas which can impede validity: giving unclear directions; using a vocabulary or sentence structure which is difficult; developing items which are either too easy or too difficult for the objectives they are intended to measure; unintentionally providing clues; developing a test of too few items to appropriately sample for the desired behavior; building in an identifiable pattern for correct answers.

Reliability refers to *the quality of test results being consistent over time* or *over similar test takers.* Potential problems with reliability are inherent in evaluation techniques which include the evaluator's subjective judgment, e.g., Essay Tests, Observation Techniques. The evaluator must be aware that his or her own opinions, attitudes, and even moods can jeopardize the reliability of results. Taking extreme care in stating the desired behavior and in establishing criteria for assessing its presence will increase the reliability of such evaluations.

LOCATION OF INSTRUCTION AND EVALUATION

Instruction in medical record education occurs in a variety of settings in order to assist students in developing knowledge, understanding, skills, attitudes, and values. This is typical of professional curricula of all types.

Location of Instruction	Primary Objective(s)	Major Teaching Techniques	Most Direct Evaluation Methods
Classroom	Development of: Knowledge Understanding Attitudes Values	Lecture Assigned Reading Panel-Forum Discussions Buzz Groups Brainstorming Programmed Instruction Audiovisual Presentations Independent Study Case Studies	Objective Tests Essay Tests Oral Reports Term Papers
Laboratory	Development of Skills Application of Knowledge	Demonstration & Practice Simulation Exercises Case Studies Role Playing	Performance Testing Observation Techniques
Clinical Site	Development of: Understanding Skills Attitudes Values Synthesis of Knowledge and Skill	Demonstration & Practice Field Trips Discussions	Observation Techniques

THE CLINICAL SETTING

The clinical evaluation setting is discussed separately because of the discomfort that is typically experienced by faculty and clinical supervisors in evaluating student performance in this learning site. The process is identical to that of evaluating any instructional outcome. Behavioral objectives are established, and the evaluation mechanism is selected which most directly assesses performance. Clinical sites are used in teaching to increase the likelihood that students develop skills, attitudes and values, and *synthesize* knowledge. Observation Techniques are the most appropriate for evaluating student outcomes in this setting. Anecdotal Records are particularly useful for documenting observations in those affiliations which are established to provide for synthesis and other high level cognitive abilities and affective characteristics. The observer uses anecdotal records to document situations which are considered significant, i.e. situations which made impressions (negative and/or positive) on the observer. The observer keeps anecdotal records, and uses them formatively to evaluate students during the affiliation and summatively at the conclusion of the experience. These records can also be used to revise and further specify the instructional objectives since the analysis of anecdotal records reveals those behaviors which the evaluator(s) found to be significant and as such they provide the raw data for assessing the value of established objectives and identifying new objectives.

Since the behavior under observation in clinical sites generally occurs at higher levels in all domains, the specification of objectives is more difficult, as is the setting of performance standards. The instructor can prevent some of the insecurity which surrounds clinical evaluation through carefully and creatively following the steps listed below (Osborn, 1981).

1. Conduct a Task/Skill Analysis which identifies all tasks the student will perform.

2. Identify critical skills for successful performance.

3. Develop performance criteria, in terms of quantity/ volume per unit of time, and in terms of quality/ accuracy.

There are other characteristics which impact on the ease, the validity, and the reliability of clinical evaluation. While in the direct care professions academic faculty are required to be present with their students, this is many times not appropriate for clinical practice in this field. We are a managerial profession. While we have a theoretical base which underlies the operation of any medical record system, procedures vary widely across institutions and rapidly over time. Academic departments cannot usually afford to delegate faculty to health care institutions for the time it would take to attain and maintain competence in all procedures. Furthermore, the affiliating departments cannot usually afford the time to "train" and continue to train faculty. This situation results in faculty serving as coordinators of the clinical experience, while departmental personnel actually provide the instruction. Who, then, evaluates the students? This decision is critical to the success of evaluation. If faculty serve as evaluators, the discomfort occurs by virtue of having the evaluator one or more steps removed from the instructional process. This problem can be reduced by the faculty member being very thorough in setting objectives and including those who will provide instruction in the objective-setting process. Providing workshops on teaching and training methods to clinical instructors can increase the feelings of security on the parts of both the academician and clinician. While it may not be feasible to have academic faculty constantly present during student affiliations, frequent visits to observe the instructional process and to confer with students and those personnel with whom students are working is critical. In some instances, the clinical supervisor is given the responsibility of evaluating students. This adds an additional concern to both parties. If this be the choice of operation, clinical personnel must be given instruction in educational evaluation. In summary, much of the concern about clinical evaluation revolves around the insecurity which is understandably experienced by both academicians and practitioners under the special circumstances inherent in off-campus instruction. An evaluation mechanism cannot remove these problems. The problems can be greatly reduced by close coordination and the provision of instruction to the practitioners who work with students. Chapter 1 provides a format for the design of inservice training for academic faculty which would be useful for designing a workshop for clinical faculty.

SUMMARY

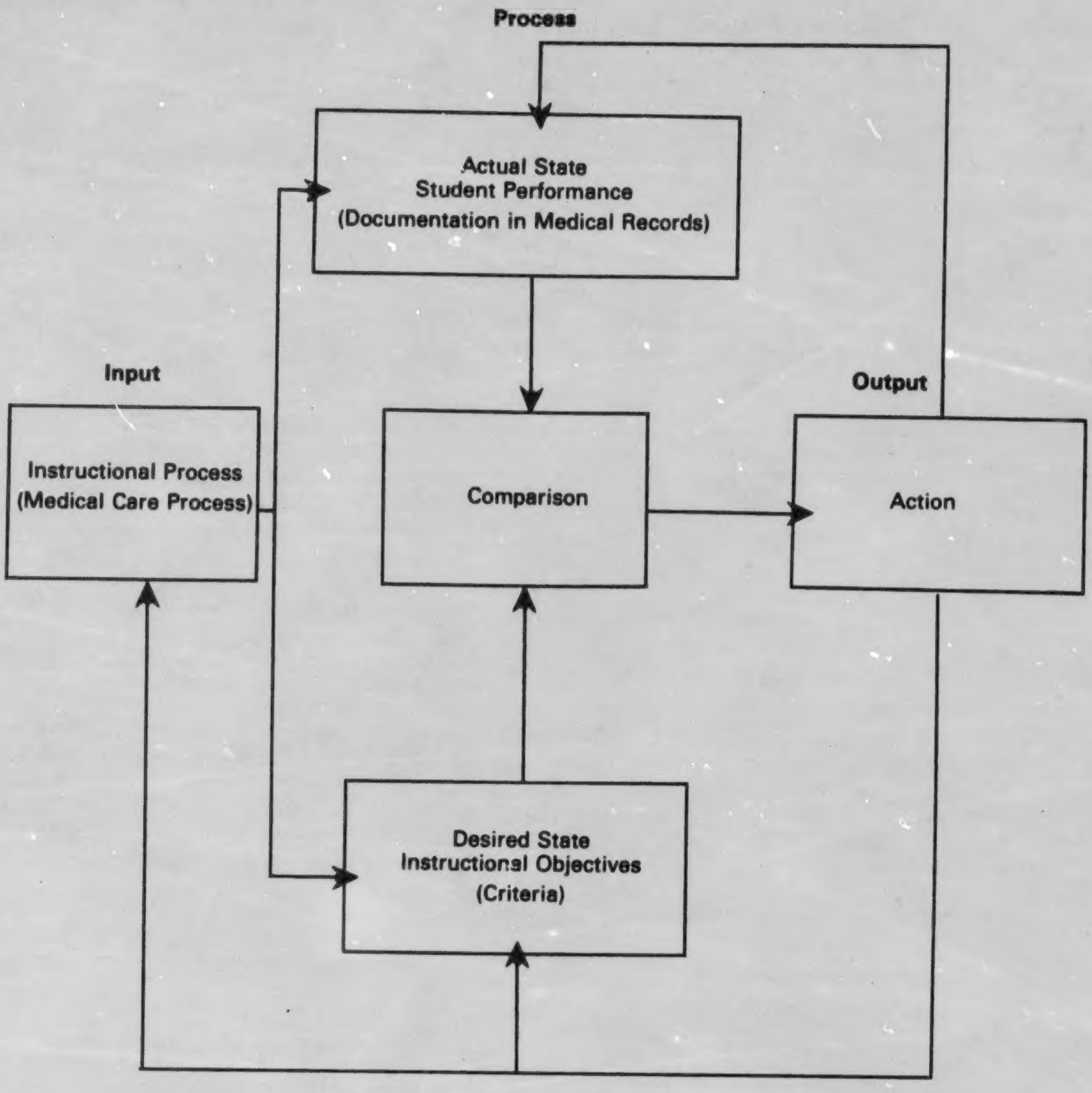
Evaluation has been restricted to the evaluation of student outcomes. Information has been presented under the assumption that the goal of any educational endeavor is that of changing student behavior. Diagnostic, Formative, and Summative Evaluation were presented relative to their significance in curricula which are organized under the "mastery learning" philosophy. Evaluation techniques and methods have been defined and exemplified relative to their effectiveness, given the purpose of evaluation (diagnostic, formative, or summative), and given the level of specificity defined in the learning objective; the domain of the objective and its hierarchical level in the domain. A discussion of the impact of the "location" of instruction and evaluation was presented with particular emphasis on the clinical setting. No distinction has been made between evaluation in baccalaureate degree programs and associate degree programs. The process and the techniques are identical. It is through the statements of behavioral outcomes (enabling and terminal objectives) that differences will occur, and these will occur by virtue of differences in the types and levels of student performance desired in the two academic settings.

Because classroom tests are used to evaluate a wide range of behavior, a section on the development of such tests is included in the appendix. An annotated bibliography is also included. The bibliography was developed by requesting three persons who are specialized in educational evaluation to present the 10 references they feel are most basic. These references were reviewed and included in the appendix list, according to their perceived potential in assisting medical record educators. In addition, several references which are specific to allied health and medical record education were included. The reader should be aware that this list is a sample of useful literature, at a basic level. It can, and should lead the user into more specialized references.

AFTERWORD

The experienced medical record practitioner who uses this chapter, as a new educator, may have felt a certain familiarity with the evaluation process as the chapter progressed. Indeed, there is reason for this feeling; the evaluation process is generic for any purpose, and medical record practitioners are increasingly becoming evaluation "experts" in their own right through their roles in quality assurance. The diagrammatic and verbal comparison is included to emphasize the fact that evaluation models are transferable.

The evaluation process consists of defining some desired state to be accomplished, "measuring" the actual situation, and analyzing any gap between the two to determine corrective action. In the familiar medical audit model, criteria of care represent the desired processes or outcomes, while the medical care process, as documented in medical records, serves to exemplify the actual processes and outcomes. An analysis of gaps can result in action to change the process of care, the definition of what is desirable (the criteria), or the documentation of care. Analagously, in educational evaluation, instructional objectives serve as statements of the desired outcomes of the educational process. These are compared with student performance. An analysis of identified gaps may result in action to change the instructional process, the evaluation techniques, or the instructional objectives. Thus, evaluation is a dynamic and systematic process, whether its purpose be to assess medical care or education.


Process
Actual State
Student Performance
(Documentation in Medical Records)
Input
Instructional Process
(Medical Care Process)
Comparison
Output
Action
Desired State
Instructional Objectives
(Criteria)

Evaluation of Student Outcomes Compared with the Medical Audit Model

APPENDIX 7-1

EVALUATION TECHNIQUES

1. OBJECTIVE TEST (Paper and Pencil Test)	A test which employs an objective scoring method.
1.1 Matching Test	A test consisting of two columns. One column contains the stimuli and the other contains responses. Students identify the pairs of items which are associated.
1.2 Multiple Choice Test (Selection-Type Items)	A test consisting of a stem which contains a problem statement, a question, and four or five plausible distractors. Students are required to select the distractor which contains the best answer.
1.3 True-False Test (Selection-Type Items)	A test consisting of a series of declarative statements. Students judge which of the statements are true and which are false.
1.4 Short Answer Test (Supply-Type Items)	A test which requires the student to supply or complete the response to a statement or question.
2. ESSAY TEST	A test in which questions are asked that allow students the freedom to approach, organize, and transmit responses in the way they desire. Essay tests may impose restrictions or responses and/or content. Subjective judgment is involved in scoring these tests.
3. PERFORMANCE TEST	A test which requires the student to actually perform the desired activity or task in a manner that is comparable to the "outside world".
3.1 Role Playing	A testing situation in which students assume roles and are evaluated on their performance of necessary tasks or activities which are incumbent in the role.
3.2 Project	The student is assigned a series of tasks to accomplish which culminate in an identifiable product, reflective of real-world requirements.
3.3 Written Term Paper	The student is required to write an in-depth paper or case study for which an extended period of time is given for completion.

4. OBSERVATION TECHNIQUES

4.1 Checklists	A device for indicating the frequency with which behavior occurs.
4.2 Anecdotal Record	Factual descriptions of the meaningful incidents and events which the instructor has observed in the student behavior. The incident observed is described by the observer, including only the facts; the instructor then makes conclusions from the facts and writes up an interpretation of what was observed.
4.3 Rating Scale	A scale indicating the degree to which the characteristics to be judged are present.

5. ATTITUDE SCALES

5.1 Likert Scales	The use of statements representing extremely favorable and extremely unfavorable opinions to elicit a respondent's extent of agreement (disagreement) for purposes of assessing attitudes.
5.2 Semantic Differential	The use of paired, polar adjectives to determine the *direction* of an attitude.
5.3 Thurstone Scales	The use of expert judgment to determine favorable (unfavorable) attitudes from opinion statements.

6. MISCELLANEOUS

6.1 Peer Appraisal	Students rate students with the same device used by faculty.
6.2 Self Appraisal	The use of evaluation techniques by the student to judge his/her own progress.
6.3 Oral Appraisal	The assessment of outcomes through eliciting oral responses to cues. Assists in evaluating the student's ability to organize thought processes and to communicate understanding.

APPENDIX 7-2

CONSTRUCTING CLASSROOM ACHIEVEMENT EXAMINATIONS*

Medical record educators are in the business of changing behavior. The assessment of change and the circumstances under which this change occurs must be determined in order to provide a basis for reporting student progress, for motivating students, for diagnosing learning difficulties of individual students and/or the entire class, and for providing students with the psychological security of knowing where they are in the course. In addition, assessment, when properly used, requires instructors to carefully evaluate this instructional effectiveness. It seems reasonable to employ the most accurate and objective means available to make these assessments. This means testing, and testing requires that educators know basic test theory and its use in everyday classroom evaluation (Chase, 1974).

This discussion presents the necessary steps for constructing classroom achievement tests. Figure 1 notes a systematic procedure for test development.

DEFINING OBJECTIVES

The learning outcomes measured by a test should accurately reflect the instructional objectives of the unit and/or course. Consequently, the students should be able to identify all the important areas to be reviewed before they take a test.

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*Adapted from King, E.C.: Constructing Classroom Achievement Tests, Nurse Educator 3:30-36, September-October 1978, and King, E.C.: Classroom Evaluation Strategies, St. Louis, 1979, The C.V. Mosby Co. (Used with permission, The C.V. Mosby Co.)

Of course, some instructional objectives cannot be measured by paper-and-pencil tests. Most of our instructor-made paper-and-pencil tests are developed to measure only the intellectual outcomes in the cognitive domain.

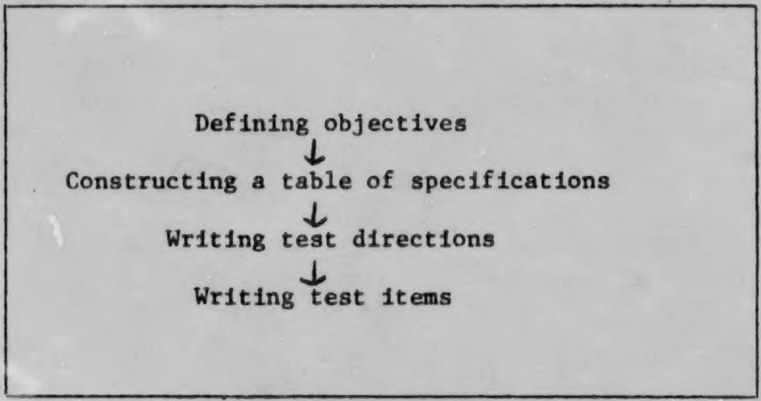

Figure 1. Systematic Procedure for Test Development

Bloom (1956) presents a framework around which instruction can be built to appropriately assess the outcomes of teaching. He presents six classes of learning outcomes that are excellent guidelines for planning a course of study and evaluating that course of study. The six classes are outlined in Table 1. By starting with the relatively simple recall of information and proceeding to the increasingly complex levels of analysis, synthesis, and evaluation outlined in Table 1, we can write specific course objectives and plan for testing the specific outcomes of learning.

CONSTRUCTING A TABLE OF SPECIFICATIONS

When learning outcomes have been well defined and the course content outlined, plans can be made for test construction. Good test development begins with the development of a table of specifications (sometimes called test blueprint). This is a two-way table with subject matter content on one side and item type on the other. It has three purposes:

- To establish the content for the test
- To balance test items among the instructional objectives
- To avoid loading the test with factual content and neglecting higher mental processes

Since medical record instructors make decisions concerning student performance at many cognitive levels, they need data at all levels. Table 2 is a sample table of specifications for a unit test on the Problem Oriented Medical Record.

Table 1 Learning Outcomes (Bloom, 1956)

	Class of Category	Measurable Behavior	Verbs for Use In Writing Objectives
1.0	Knowledge (recalling previously learned material)	Defines terms; lists specific facts; states methodologies, principles, and rules.	Define, recall, name, list, repeat
2.0	Comprehension (grasping the meaning of material)	Converts from one symbol system to another; explains material; and translates the material into own words.	Translate, discuss, describe, explain, recognize
3.0	Application (using information)	Applies the appropriate abstraction without being prompted; interprets principles and rules as they apply to practice.	Interpret, illustrate, apply, use, demonstrate
4.0	Analysis (breaking down material into its component parts)	Breaks down material into its component parts and compares the parts.	Analyze, differentiate, calculate, compare, contrast, categorize
5.0	Synthesis (putting together parts to form a whole)	Produces something unique by restructuring and reordering ideas or objects.	Compose, rearrange, design, create, formulate
6.0	Evaluation (judging the value of ideas, works, solutions, methods, materials.	Critically evaluates ideas, plans of actions, products, etc., based on definite criteria.	Evaluate, assess, judge, rate, appraise

Table 2   Table of Specifications for Problem Oriented Medical Record Unit

Outcomes Content	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Summary
POMR Evaluating and implementing	10 (10%)	5 (5%)	5 (5%)	0	0	0	20 (20%)
Data Base	10 (10%)	5 (5%)	1 (1%)	1 (1%)	1 (1%)	2 (2%)	20 (20%)
Problem list	10 (10%)	5 (5%)	0	0	0	5 (5%)	20 (20%)
Progress Notes	20 (20%)	7 (7%)	3 (3%)	2 (2%)	3 (3%)	5 (5%)	40 (40%)
	50 (50%)	22 (22%)	9 (9%)	3 (3%)	4 (4%)	12 (12%)	100 (100%)

The raw numbers in each cell of the table indicate the number of test items to be devoted to each major area. For example, 20 test items will be written to evaluate the section on problem listing; however, from these 20 test items, 10 will measure knowledge, 5 will measure comprehension, and 5 will measure the student's ability to evaluate.

The precentage of the content areas to be tested and the percentage of emphasis placed on knowledge, comprehension, application, analysis, synthesis, and evaluation are both illustrated in each cell of Table 2. Note that the total percentages for six classes of learning outcomes is 100 percent and the total of the percentages for the content areas is 100 percent. In Table 2 the instructor has decided to divide the problem oriented medical record into four sections: evaluating and implementing, data base, problem list, and progress notes. Three topics receive a weight of 20 percent, since two weeks of instruction will be spent on each topic. Progress notes receive a weight of 40 percent since four weeks will be spent on that topic. Of course, one might take issue with the instructor's choice of sections to emphasize. For example, some instructors may believe the greatest emphasis should be placed in data base while others may believe the problem list needs more emphasis. Given the instructor's weighting decisions, however, we cannot say that the test plan in Table 2 is inappropriate.

In summary, the development of a table of specifications allows the instructor to build classroom tests that go beyond the knowledge level and ensures that the test is representative of the objectives stressed in class. It provides a realistic view of the testing situation. In addition, it allows the medical record instructor to know what is actually being assessed and, perhaps more importantly, what is not being assessed. After using this procedure, more than one instructor has changed the scope of his/her interpretation of classroom tests. With constant revisions, the creation of one table of specifications may assist the instructor with the construciton of tests for a number of years.

The following examples illustrate how test items for Table 2 can be constructed to measure cognitive learning outcomes:

1.0 Knowledge

In what section does a new problem first appear in the problem oriented medical record?

1. Treatment plan
2. Problem list
3. Progress note
4. Initial plans

2.0 Comprehension

Which problem(s) would be included on the problem list?

A. Past history of alcoholism
B. Appendectomy (1965)

C. Elevated blood pressure
D. Indigestion

1. A and B
2. A and C
3. B and C
4. C and D

3.0 Application

According to the SOAP Progress Notes, identify the following type of statement:

"Attacks of dyspnea increasing in severity."

1. Subjective statement
2. Objective statement
3. Assessment
4. Plan

4.0 Analysis

An air traffic controller, Mr. Andrew Halette, complains of recurring indigestion which has become more frequent since his divorce six months ago. He has been worried because the judge awarded custody of his two sons to his wife and now is refusing to grant him visitation privileges. Mr. Halette is also seriously in debt and is having problems paying child support. He has been taking 50 mg. of Hydrodiuril daily for hypertension for five years which has kept his blood pressure under control. However, his current reading is 190/110. A laboratory report shows elevated blood sugar. In 1965 he had an appendectomy.

Considering the above information which of the following would be included in an ACTIVE problem list?

1. indigestion, hypertension and family problems
2. financial difficulties and family problems
3. indigestion, hypertension and elevated blood sugar
4. family problems, hypertension and indigestion

5.0 Synthesis

Transfer the narrative note below to the progress note format of the Problem Oriented Record.

Mrs. Duvall has an abnormal glucose tolerance test. Upon questionning she reports that she has had increased hunger as well as polyuria. Her blood sugar will be checked in ten days and a 1500 calorie ADA diet will be recommended. Considering this to be adult onset of diabetes, her condition can probably be managed by diet alone, provided she can follow a strict diet.

6.0 Evaluation

Your hospital does not use the POMR and the present records have always been found in compliance with HHS and JCAH standards. You're ambivalent about converting to POMR. You are going to compare your present medical record system and the POMR. In evaluating both systems, the BEST reason for making the change to the POMR is the POMR:

1. provides an organized, logical record for protection of information.
2. will improve patient care by improving the continuity of care.
3. provides information to insure reimbursement for services.

WRITING TEST DIRECTIONS

The directions for a test should be as simple and as complete as possible. For a teacher-made test, adequate and complete directions should include the following (Thorndike and Hagen, 1969):

- The number of questions on the test
- The number of pages making up the test
- The exact amount of time in the testing period
- A statement indicating how to record the answers
- A statement telling the student to inspect the test before beginning
- A statement indicating whether to guess when in doubt

While it is the student's responsibility to take the test, it is the medical record instructor's responsibility to prepare adequate directions. For example, suppose that during collation a page of the test is omitted. Without complete directions, how is the student to know that there are really 50 test items, not 35? Or suppose the instructor has planned to allow two hours to complete the test but the usual classroom time is one hour. Or suppose the student marks all the answers on the original test booklet when an answer sheet is required for computer scoring. Good directions are important and they contribute to the overall reliability of the entire test. The following is an example of properly written test directions:

Test Directions

For each question below, choose the best answer. Indicate your choice by filling the space under the appropriate number or letter on the answer sheet. Be sure that the number of the question you are answering is the same as the question number on the answer sheet where you are indicating your choice. Answer every question, even if you are not completely certain that the answer you are giving is the correct one. Each correct answer is worth one point. There are 40 questions on this test. Examine your test booklet to see that it has the required number of questions.

Write your name on the line provided on the test booklet, and record your booklet number on the answer sheet in the space labeled Grade. You have two hours to complete this test. Do you have any questions about what you are to do? Turn the page and begin. Good luck!

WRITING TEST ITEMS

In constructing an achievement test to fit the table of specifications, the instructor has a variety of items-types as possible choices. Here we consider only objective test items. An objective test item is one that can be scored in such a way that there is an obviously right or most correct answer.

Objective test items can be divided into two kinds: (1) supply-type objective items, which require the student to provide words, numbers, or symbols (short-answer and completion test items), and (2) selection-type objective items, which require the student to choose the correct response (true/false, matching and multiple-choice items).

SUPPLY-TYPE TEST ITEMS

The supply-type test item has two major advantages: it minimizes the likelihood of correct guessing and it is relatively easy to construct. However, it has major weaknesses. First, supply items usually only demand recall of basic factual information rather than complex learning. In addition, they are often difficult to score because of the variety of partially correct responses.

Guidelines for Writing Supply-Type Test Items

1. Design items to have only one correct answer, which is short and definite.

   Poor: A disease condition has _______ digits.
   Better: The international classification of diseases (i.e., ICD-9-CM) classifies a disease condition by using a minimum of _______ digits.

   The poor item has several correct answers and thereby is difficult to score. The better item is much more definite and, consequently, it is less ambiguous to answer and score.

2. Avoid removing statements verbatim from textbooks and/or other sources.

   Wholesale lifting of passages encourages the student to memorize selected content from the course readings and does not encourage the student to apply data and make generalizations. In addition, statements may be taken out of context, and the "correct" answer may be very difficult for the student to determine.

Poor: Before administering the drug Digoxin, the nurse must take the _________.

Better: Which pulse must be taken before administering the drug Digoxin? ____________

In the poor example, a sentence taken directly from a textbook, it is difficult to decide on the correct answer. For example, the student may write any response from the temperature to the blood pressure. The rewritten test item is much clearer and, consequently, it is easier to interpret and score.

3. Avoid eliminating so many words that a clairvoyant is needed to answer the statement.

Poor: ICD-9-CM is a _______classification designed to furnish __________on ___________ of diseases.

Better: A statistical classification designed to furnish quantitative data on groups of diseases is the ________.

Eliminating too many terms from a statement makes it difficult for the student to respond. The poor item completely loses meaning and may frustrate the student.

4. Always indicate the units in which the answer is to be expressed.

Poor: An arbitrary assignment for patients with no diagnosis is ______________.

Better: An arbitrary assignment for patients with no diagnosis is __________days.

Indicating the units in which the answer is to be expressed clarifies the item for the student and makes scoring easier.

5. Place blanks near the end of the statement, not near the beginning.

Poor: A ________ _______ is written when there is a significant change in the status of the problem.

Better: When there is a significant change in the status of a problem a _______ _______ is written.

The reason for placing the blank near the end of the statement is that it allows the student to read the complete question before responding.

TRUE/FALSE TEST ITEMS

The true/false item has been widely used in teacher-made classroom tests. They can be written fairly rapidly, a large amount of subject matter can be tested in a relatively short period of time, and scoring is fast and easy. However, the true/false test item has also been subject to much-deserved criticism. The items often test relatively unimportant pieces of information, they encourage guessing, and they are often ambiguous.

Guidelines for Writing True/False Test Items

1. Write statements that are true or false without qualifications.

   Poor: T F Insulin is an effective drug for the treatment of diabetes mellitus.

   Better: T F Insulin is used as an effective drug for the treatment of diabetes mellitus when oral hypoglycemics or diet control alone is unsuccessful.

   Each item should be true or false without qualifications. Many statements which are supposed to be true cause difficulty because the critically thinking student can think of exceptions or reasons why the statement is not universally true. Although the poor statement is keyed true, the students with the most information know there are many cases where oral hypoglycemics and diet control alone are effective treatments for diabetes mellitus.

2. Avoid use of specific determiners such as only, all, never (usually found in false statements) or generally, often, sometimes (usually found in true statements).

   Poor: T F In 1900, most deaths were caused by infections.

   Better: T F The two leading causes of death in 1900 were tuberculosis and diarrhea.

   Students will likely answer the first item as true; however, the rewritten item clearly demands more knowledge for the student to answer correctly.

3. Keep true/false items relatively short and restricted to one central idea.

   Short statements increase the likelihood that the item is clear and reduce the possibility of a guessing game.

4. If true/false items are used often, be certain that the percentage of true/false items is not constant from test to test.

Special True/False Items

The true/false item tends to be free of most criticism and be most useful when it is based on some given material (for example, a chart or patient case study). An advantage of this kind of question is that it allows the instructor to more effectively evaluate the student's ability to analyze, synthesize, and evaluate. An example follows:

> In each of the statements below, the audit title or diagnosis is given with related criteria. In addition one of the three major types of audit criteria is given.
>
> Indicate whether the major criterion type category indicated is true or false.

	Audit title	Related criteria	Major Type of Criterion
1.	Acute otitis media	Acutely draining ear, not responding to outpatient care.	Justification
2.	Pneumonia	Afebrile for 48 hours and off antibacterial drugs for 48 hours.	Outcome
3.	Pneumonia	Bronchoscopy	Indicator
4.	Fibromyoma of uterus	Urinary tract infection	Indicator
5.	Carcinoma of the lung	Pleural or sputum cytology	Outcome
6.	Carcinoma of the lung	Mortality	Indicator
7.	Gastroenteritis	Intercurrent infection	Indicator
8.	Tonsillitis	Bleeding uncontolled	Outcome
9.	Cataract	Availability of home care noted	Outcome
10.	Diaphragmatic hernia	Post-operative pneumonia or atelectasis	Indicator

1. [✓ T] F   3. T [✓ F]   5. T [✓ F]   7. [✓ T] F   9. [✓ T] F

2. [✓ T] F   4. [✓ T] F   6. T [✓ F]   8. T [✓ F]   10. [✓ T] F

MULTIPLE-CHOICE TEST ITEMS

The Multiple-choice test item is one in which an incomplete statement is presented and a number of possible responses or options are given. The question or incomplete statement introducing the item is called the *stem*. An incorrect answer is called a *distractor* or a *foil* Figure 2 illustrates the parts of a multiple-choice test item.

Figure 2.

Edema is a term used to describe: STEM

1. Loss of feeling ------ FOIL/DISTRACTOR
2. Hemorrage ------------ FOIL/DISTRACTOR
3. EXCESS FLUID --------- CORRECT ANSWER
4. Tissue injury -------- FOIL/DISTRACTOR

The outstanding feature of the multiple-choice item is its versatility. All levels of the cognitive domain can be tested by this item. It can be quickly and easily scored. Its primary limitation is that the multiple-choice item is often time-consuming and difficult to build. However, its advantages far outweigh these limitations.

Since writing good multiple-choice items takes much time and thought, many medical record instructors do not allow their exams to be freely distributed. Students are allowed to review the exams in the instructor's office. Consequently, the instructor does not have to completely rewrite examinations each semester.

VARIETIES OF MULTIPLE-CHOICE ITEMS

Negative: There are many times when the use of negative wording is basic to the measurement of learning. For example, knowing that you should not administer a specific drug intravenously is so important it requires negative emphasis. Many medical record procedures place some emphasis on practices to be avoided. However, since negative wording in the stem can present difficult reading problems to students, negative wording should be emphasized by underlining or by using CAPITAL letters. Remember, the primary objective of testing is to measure learning outcomes not to trick students.

Which one of the following items is NOT included in the framework of responsibility for concurrent review coordinators?

1. inpatient medical record review
2. referral of cases to Physician Advisor
3. assignment of length of stay days
4. decisions of denial of payment
5. referral of cases to U.R. Committee

Multiple-response: In a multiple-response question, as few as one or as many as five correct answers may occur. To avoid possible confusion, you must write clear, concise directions if you use multiple-response items.

A 40 year old patient was admitted from the Emergency Room in a diabetic coma. The symptoms were relieved, diabetes controlled, and the patient is resting well on the day of your review. You would:

- a. assign additional days stay
- b. refer the case to the Physician Advisor
- c. refer case for transfer to Skilled Nursing Facility
- d. recommend discharge

Combined-response: The combined-response multiple-choice item is effective to measure the student's ability to analyze, evaluate, and problem solve. It is often more difficult to answer and more discriminating than the typical form of a multiple-choice item (Hughes and Trimble, 1965).

A deficiency of Vitamin A causes:

- a. poor fetal development
- b. abnormal bleeding
- c. poor bone development
- d. night blindness
- e. skin disease

1. b and c
2. d only
3. a, d, and e
4. All of the above

Conditions in which cathartics are contraindicated include:

- a. chronic constipation
- b. bacterial infection
- c. leukemia
- d. post myocardial infarction

1. a
2. a, b, and d
3. c and d
4. a, c, and d

GUIDELINES FOR WRITING MULTIPLE-CHOICE ITEMS

1. Select foils that are plausible to those who do not know the content demanded by the item.

Poor: Using Volumes I and II of ICD-9-CM select the BEST coded number for diabetes mellitus without mention of acidosis or coma.

1. 250.3
2. 250.0
3. 753.6
4. 918

Better: Using Volumes I and II of ICD-9-CM select the BEST code number for diabetes mellitus without mention of acidosis or coma.

1. 250.0
2. 250.1
3. 250.3
4. 250.9

The revised item is obviously more difficult to answer than the original one, because the options are more plausible to those who do not know the content demanded by the item. In the poor example, the item really functions as two-choice item, because no one is likely to choose options 3 or 4. Also note that the options are written in increasing numerical order.

2. Vary the number of available choices, using at least three, but not more than five.

We do not need to bluntly adhere to a fixed number of options for each multiple-choice item. Sometimes it is difficult to write four good foils. Rather than including a foil that is obviously incorrect, it is recommended to only use the most effective foils.

3. Be certain that the length of the option is not related to the tendency to be correct.

There is a tendency for the correct answer to be longer than the distractors because of the need to make the answer unequivocally correct. Obviously, this provides a clue to the test-wise student. If it is impossible to shorten the correct answer, adjust the distractors to make them approximately equal in length.

Poor: As to the Medical Record Administrator, you realize that psychosocial data base which is essential for comprehensive health care is one of the most neglected areas. To correct this deficit, the BEST course of action would be to:

a. construct a defined data base.
b. get input from a multi-disciplinary team to formulate a standardized data base.
c. get developed data base from another facility.

Better: As the Medical Record Administrator, you realize that the psychosocial data base which is essential for comprehensive health care is one of the most neglected areas. To correct his deficit, the BEST course of action would be to:

a. construct a defined data base.
b. develop a data base with a multi-disciplinary team.
c. get developed data base from another facility.

4. Place as much information as possible in the stem.

Poor: In the article "The Medical Business" by J.L. Goddard, the author concludes that currently the federal government has:

1. adequate control over the manufacture of medical supplies.
2. little or no control over the manufacture of medical supplies.
3. very strict control over the manufacture of medical supplies.

Better: According to J.L. Goddard, what is the approximate amount of control the federal government has over the manufacture of medical supplies?

1. adequate control
2. little or no control
3. very strict control

By rewriting the poor item in question form, it is possible to avoid repeating the material in each alternative. The improved item further clarifies the problem and reduces the time required to read the alternatives.

5. Make all choices (correct answer and foils) grammatically consistent with the stem.

The correct response is almost always grammatically consistent with the stem. However, the instructor must take special care when writing the distractors. When the distractors are not grammatically consistent with the stem, test-wise students are likely to get the item correct without knowing the information.

Poor: In 1900, the leading causes of death were:

1. accidents
2. heart disease
3. cancer
4. typhoid fever and accidents
5. infections and communicable disease

Better: In 1900, the leading cause(s) of death was(were):

1. accidents
2. heart disease
3. cancer
4. typhoid fever
5. infections and communicable disease

6. Make certain each item is independent of the other items:

Sometimes information is given in one item that helps to answer another item. These cues increase the likelihood that an alert student will obtain the correct answer without knowing the information. Sometimes instructors make the answer for one question depend on the correct answer to another question. Such interdependent items should also be avoided. They increase the likelihood that a student will answer correctly more items than his or her knowledge warrants.

MATCHING ITEMS

The matching item is merely a modification of the multiple-choice item. Instead of testing the alternative responses beneath each individual stem, a series of stems called premises is listed in one column and the responses are listed in a second column (Gronlund, 1968). The primary advantage of the matching item is that much factual information can be tested in a short time. However, good matching items are often difficult to build.

Furthermore, all of the responses constructed for the test items must serve as plausible alternatives for each premise. If this does not occur, the matching item format is inappropriate.

Guidelines for Writing Matching Items

1. Make lists of premises and responses as homogeneous as possible.

Unless all of the responses in the matching test item are reasonable alternatives to all of the premises, a matching item is not recommended.

2. Write clear directions that specify if each response can be used once, more than once, or not at all.

Clearly written directions simplify the test item for the student and increase the overall reliability of the test.

Poor: Place the correct letter to the left of each answer:

Column A	Column B
___1. Major division(s) of ICD-9-CM, Vol. II	a. Diseases and injuries; drugs and chemicals; external injury cause and poisoning.
___2. Diabetes mellitus without mention of acidosis or coma	b. 250.0
___3. Chronic cholecystitis and cholelithiasis	c. adverse effects
	d. 28.3
___4. Premature birth, living child delivered by low forceps	e. 650
	f. 65.61
___5. Bilateralsalpingo-oophorectomy	g. 574.1
___6. Tonsillectomy and adenoidectomy	h. External cause of injury

Better: Directions: Match the appropriate ICD-9-CM code number from Column B to the appropriate disease condition in Column A. Put your answer on the line to the left of each item in Column A. Each item in Column B may be used once.

Column A	Column B
Disease Conditions	ICD-9-CM Code Numbers
A 1. Diabetes mellitus without acidosis or coma	A. 250.0
	B. 296.2
H 2. Stricture of the urethra, congenital	C. 65.65
	D. 650
F 3. Chronic cholecystitis and cholelithiasis	E. 28.3
D 4. Premature birth, living child delivered by low forceps	

Column A	Column B
Disease Conditions	ICD-9-CM Code Numbers
E 5. Tonsillectomy and adenoidectomy	F. 574.1
	G. 918
C 6. Bilaterial salpingo-oophorectomy	H. 753.6
B 7. Depressive reaction, involutional	

The poor example illustrates many of the common mistakes made when writing matching items. The directions are poor because they do not clearly specify the basis for matching. Furthermore the items in Column A are heterogeneous. The improved example has clearer directions and a homogeneous Column A.

SUMMARY

This discussion is designed to help medical record instructors build better teacher-made tests. We have discussed a systematic framework for test development which includes defining cognitive learning objectives; constructing a table of specifications; writing clear, concise test directions; and writing objective test items.

Improving their ability to write classroom achievement tests enables instructors to more effectively monitor student progress, assess their own teaching effectiveness, and diagnose student learning difficulties.

By keeping in mind that test construction is a continuous process and by developing a systemic approach to test construction, we can produce superior classroom assessment instruments.

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> Forty-nine activities and exercises, each directed to experience and develop the affective component of learning, are included in this book. For example, exercises are designed to develop the following affective components: self-disclosure, communication skills, perceptions of self and others, building trust, etc. Each exercise has been field-tested and some include instruments. The editors recommend that the instructor/facilitator consider these factors: (1) the developmental stage of the learners; (2) the learners' personal needs; and (3) the facilitator's personal competencies. Lack of professional experience and adequate background training have been cited as two prominent limitations.

APPENDIX A

A FRAME OF REFERENCE FOR MEDICAL RECORD EDUCATION

I. Patients and Their Health Care Needs

II. The Health Care Field and Its Institutions

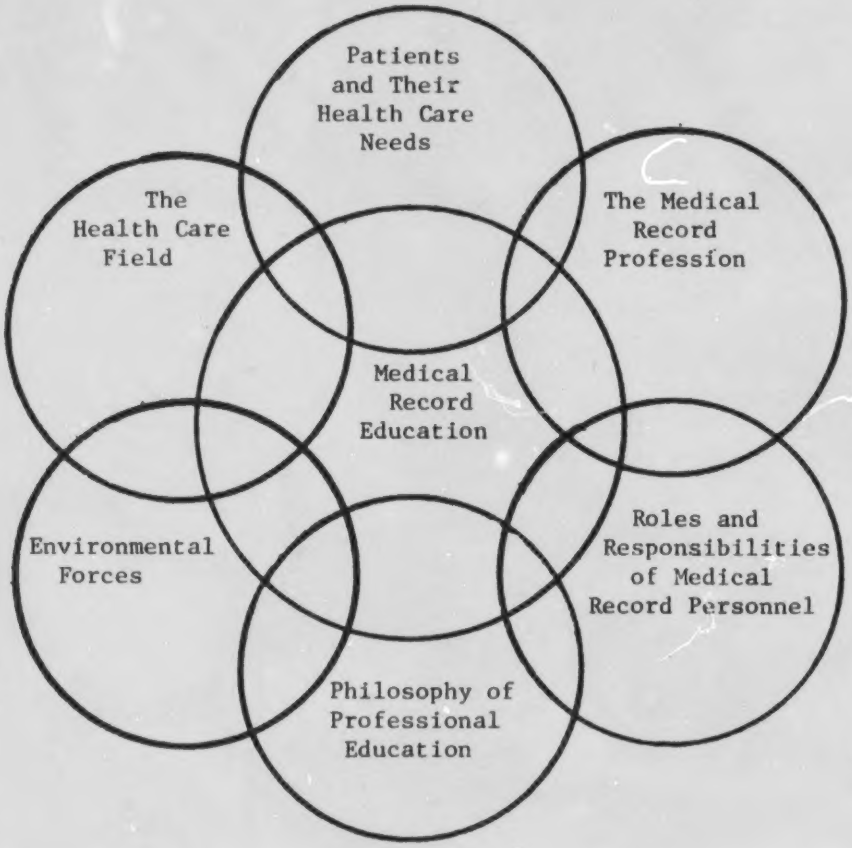
III. The Medical Record Profession

IV. Philosophy of Professional Education

V. Roles and Responsibilities of Medical Record Practitioners

VI. Environmental and Societal Forces

A FRAME OF REFERENCE FOR MEDICAL RECORD EDUCATION


Patients and Their Health Care Needs
The Health Care Field
The Medical Record Profession
Medical Record Education
Environmental Forces
Roles and Responsibilities of Medical Record Personnel
Philosophy of Professional Education

A FRAME OF REFERENCE FOR MEDICAL RECORD EDUCATION

Introduction

Webster defines a frame as a *"structure composed of parts fitted together and united; a constructional system that gives shape or strength."* A frame of reference is defined as a *"set or system, as of facts or ideas, serving to orient or give particular meaning."*

A frame of reference for professional curriculum development is a set of ideas and facts which provides a structure of essential components for the profession, around which the curriculum is organized, sequenced, and integrated. It forms the basis for selection of instructional content, process, and evaluation.

In this context, a frame of reference for the medical record field provides a basic structure of ideas, philosophies, facts, and forces which influence medical record practice iteself and the individual practitioner for whom the curriculum is designed. It delineates the parameters within which the curriculum is designed and its major components.

Each program must develop or adapt a frame of reference for its own curriculum planning, which includes the ideas, facts, values, and identified internal and external forces which impact the program, its students, faculty, and the institution in which the program exists. Program goals and specific objectives can then be developed related to these identified concepts and forces. The purpose of this appendix is to provide background information to assist faculty in developing a philosophy of education for their own programs.

A conceptual frame of reference for a competency-based curriculum for allied medical disciplines was developed by Broski (1977) and others at the Ohio State University, through the cooperation of six Divisions in the School of Allied Medical Professions. This model illustrates three major aspects of professional practice in allied health professions: 1) the various roles of the practitioner in health care delivery; 2) the general categories of functions performed by practitioners in the delivery of their specialty services; and 3) the context of patient needs for which the services are provided.

The four general roles of the practicing health professional defined by Broksi are the clinician role, the educator/counselor role, the managerial role, and the research role. The functions performed by allied health professionals in delivering their special types of health care services were grouped into four general areas: planning, organizing, implementing, and evaluating. The four types of patient needs for health care services (disease prevention, health maintenance, crisis care, and long-term care), provide the context within which these services are delivered.

In this model, the patient and his needs occupy a prominent place. Emphasis is placed on curriculum content and processes which prepare practitioners for the interconnecting aspects of their work in the delivery of health care services to patients. The specific roles, responsibilities, and competencies necessary for professional practice must be identified by the profession itself.

Another model by Chater (1975) for nursing education includes a three-part matrix: the student, the setting, and the subject. It provides a unifying framework around which a program can organize curricula.

Fenner (1979), seeking to develop a conceptual model for nursing education at the associate degree level, focused on nursing practice and patient care needs. She provided a structure incorporating the continuum of increasing complexity of nursing care, ranging from client self-care to levels of care provided by technical and professional nurses. This model enabled faculty to focus on specific components related to the levels of patient care that associate degree nurses were expected to provide

Hanavan (1980), discussing issues in alled health education, emphasized that *"the patient and what is right for the patient must always be the starting point for our self-definition."* He suggested that all health professionals consider how their professional services can be made more available, more efficient, and more relevant to the actual needs of patients, and advocates a patient-centered approach to curriculum planning for educational programs for allied health professionals.

The final paragraph of the Patient's Bill of Rights of the American Hospital Association (AHA) (1972) makes a health care philosophy statement which should be part of the frame of reference for the education of all health professionals.

> *A hospital has many functions to perform, including the prevention and treatment of disease, the education of both health professionals and patients and the conduct of clinical research. All of these activities must be conducted with an overriding concern for the patient and, above all, the recognition of his dignity as a human being. Success in achieving this recognition assures success in the defense of the rights of patients.*

While many of the precepts of the AHA Patient's Bill of Rights have implications for medical record practice, the sixth precept has particular importance: *"The patient has a right to expect that all communications and records pertaining to his care should be treated as confidential."* In developing a frame of reference for Medical Record Education, six major components are considered to impact significantly on all aspects of medical record education. These six components are listed below and are proposed as a frame of reference for educational program development.

These concepts must be taken into consideration in curriculum planning for Medical Record Technician and Medical Record Administrator Educational programs, as they represent major factors influencing curriculum parameters and content.

I. Patients and Their Health Care Needs

II. The Health Care Field and its Institutions - including factors which influence health and disease, delivery of health care services, and current health care issues.

III. The Medical Record Profession-how professional practice is carried out and how the profession is organized.

IV. The Philosophy of Professional Education for Medical Record Practice-including the practice base for medical record education, AMRA's educational philosophy, recommendations of the National Commission on Allied Health Education.

V. The Roles and Responsibilities of ART and RRA Medical Record Practitioners

VI. Environmental Forces Which Impact on Medical Record Professional Practice-technological, political, economic and social forces including values and value shifts.

Professional practice revolves around medical record and health information services provided by the medical record practitioner in health care delivery settings. Each health care setting is unique, devoted to specific patient care needs. The individual setting influences what the medical record practitioner must provide in the way of medical record and health information services. Registered Record Administrators (RRA) and Accredited Record Technicians (ART) provide services in acute, long term care, and specialty hospitals; ambulatory care facilities and outpatient clinics; rehabilitation institutions; skilled nursing facilities; health maintenance organizations; health departments and other government agencies; insurance companies, and employee health clinics in many types of businesses. Many of these settings are undergoing changes to which medical record practitioners must adapt. The traditional health care setting, the acute care hospital, is faced with competition from the more comprehensive health maintenance organizations and various types of ambulatory care facilities. All health care institutions are focusing on concerns regarding costs and the necessity of treatment and care.

The underlying philosophy of medical record education is that the roles and responsibilities of professional practice must form the basis for curriculum design and development. Medical record practitioners are essential members of the health care team who work in close association with other health care practitioners in patient care. In recognition of this, a key concept included in the AMRA Philosophy of Education is that health practitioners who work together should learn together.

The professional organization, AMRA, serves as a focal point for professional practice activities, for identifying appropriate roles and functions for medical record personnel, and for determining educational and certification requirements for professional practice. Research conducted by the professional organization has identified roles and responsibilities for entry-level practitioners, which form the basis for educational program planning.

Environmental forces -- technological, economic, political, and social -- impact medical record practice and medical record education. Rapid advances in the technology of medical record services, require an ongoing commitment to education in the growing areas of computerization and information management. The present inflationary economy, rising costs of inpatient and outpatient care as well as high technology, diagnostic and therapeutic biomedical advances, pressure the medical record professional to contain costs of services by efficient and adequate record keeping, non-duplication of reports, and accurate data maintenance and reporting. The political climate influences medical record practice in a direct way, when, through health legislation and regulations, mandates for additional health record information or patient confidentiality requirements are enforced and systems for quality assurance and risk management in health care are required.

Changing social values are shown in national movements which focus on, for example, the needs of the terminally ill, the disabled, disease prevention, holistic medicine, public health and environmental protection. These national movements influence health practitioners' awareness of specific health problems, and the need for creation of new types of health care facilities and medical record services.

Detailed discussion of the six components of a frame of reference for medical record education is provided in the following sections.

I. PATIENTS AND THEIR HEALTH CARE NEEDS

A. INTRODUCTION

In the 1970's, the concerns of those responsible for the delivery of health care centered around legislation, cost containment, accessibility, quality, continuity, and acceptability. These same health care concerns have continued in the 1980's and have been joined by additional health concerns for holism (holistic health care), wellness, and self-responsibility (self-care). Superimposed upon these concerns is the overall concern of helping patients to achieve their health care needs on a continuum, that is, in a system of comprehensive health care services ranging from health maintenance and promotion to health care treatment and rehabilitation.

A greater concern for being healthy reflects a greater personal awareness of physical activity and exercise, nutrition and diet, anxiety and stress management, biofeedback and self-hypnosis, and consequent changes in overall individual life-style. The current emphasis is not on illness or disease, but on wellness. *"Wellness"* will be the health care goal of the decades ahead. The task at hand will be to create a philosophy that will ensure that *"wellness"* becomes a typical and habitual part of our lives.

B. HEALTH AND OUR BELIEF SYSTEMS

The major barriers to changing our thinking from *"illness"* to *"wellness,"* according to Dever (1980), are our belief systems or memory tapes. Dever states that *"our beliefs are entrenched so deeply in our philosophy that the physician and the medical care system will have to provide major supports to enable us to overcome our life-death crisis and to make us well."* Many of us are not able to take care of our own health care needs. The physician and the medical care system are doing much in the areas of curative and treatment services. However, as individuals, we are not helping ourselves stay well. Health care professionals and practitioners are not doing enough to emphasize *"wellness,"* to educate patients and other consumers about health, to provide the environment for good health practices, to develop the interpersonal and intrapersonal skills needed to facilitate communications in the health care setting, to encourage positive health behavior, or to practice good health behavior. Wellness is a function of health prevention and maintenance and involves self-responsibility. As individuals, we must increase self-responsibility for our own health. Our focus must be on health maintenance and disease prevention and on changing personal behavior. This is the individual's responsibility.

Health care institutions can do much to help meet the health care needs of the patient by providing the needed resources and support.

According to Travis (1977), *"the primary orientation of wellness is on increasing the conditions of wellness."* Travis notes that wellness is a self-designed life style. He points out that traditional medicine places its emphasis on the treatment of disease, disability, signs, and symptoms of disease, whereas wellness education encourages growth and self-actualization. Health in the future will be a function of self-responsibility and authority, both of which are the main components of good health management.

C. THE BEHAVIORAL PERSPECTIVE OF HEALTH CARE DELIVERY

There is general concern that health care is not being delivered in an organized or systematic fashion. Some of this concern is related to the belief that our health care systems are not designed to provide widespread, efficient, and correct use of our contemporary medical technology. Some think that a more integrated and orderly health care system could be developed in accordance with research findings that suggest the pursuit of optimal ways to bring people into the system and to keep them there while high quality medical care is provided to them.

A major problem today in the delivery of health services is that a majority of health care specialists, practitioners, and facilities operate independently of one another. The coordination of health care services on a continnum becomes a goal not readily achievable under the present system of health care services delivery.

In part, some of the problems in the delivery of health services are attributable to the fact that the costs of medical care are not determined by the factors of supply and demand for quality medical services. Rather, the increasing use of third-party payors for the reimbursement of the costs of health care services has reduced the concern of the patient about the actual costs of the health care services received. In addition, the average consumer of health care services does not have the awareness nor the financial or motivational capacity to critically compare the relative effectivenss of the services provided by the several types of health care facilities and providers. When surgery is indicated, patients are frequently advised to seek a second or third medical opinion. However, after obtaining the opinion of two or three physicians, it is still unclear how the patient actually comes to make his decision to have or not to have the surgery. Most likely, the decision is not based totally on the comparative data presented to the patient by each physician regarding the accuracy of the diagnosis and the probability of success of the medical treatment. Rather, it is probably based on whether or not the patient is impressed by the physician, or whether the patient sees any immediate threat to his health or life. Therefore, as the use of third-party reimbursement plans increases, and the patients have continued difficulty in determining the relative cost-benefit of comparable health care or medical care services, the relative cost of health care and medical care services will continue to increase without a concomitant increase in the quality of the services delivered.

One very important, although not new, approach to the understanding of patient interests and needs with respect to the use of health care services (that has had only limited acceptance on the part of most health care providers) is the use of behavioral science procedures to improve the utilization of health care delivery, as many of the problems encountered in the delivery of health care services may be conceptualized in terms of behavior, both on the part of the patient and the provider. There are two major models of behavior and health care that relate health to specific behavioral and psychological factors that may influence engaging in health behaviors. These two models, as noted by McNamara (1979), are:

1. Health Belief Model - This model relates patient expectations and perceptions, along with various environmental cues, to predict the likelihood of patients' engaging in health or illness behaviors. The underlying assumption in this model is that predictions for many of the health behaviors involved in preventive medicine may be a function of the extent of the threat of a particular disease.

2. Behavioral Framework Model for the Study of Human Disease - Using this model there are many aspects of health status, behavior, and health care treatment acceptance to be considered:

    a. the stages of illness,
    b. the types of health-related behaviors,
    c. the stages in the patient's medical decision-making that involve the effects of disease on behavior, and
    d. the behavioral stages involved in the delivery of health care.

This segment of the *"Frame of Reference"* is intended to acquaint the medical record practitioner with the use of behavioral science procedures in the health care delivery process. Although this is a relatively new area, it is an area that appears to be particularly well-suited to the implementation of behavioral science procedures, since so much of the process of health care delivery depends on the patient's acceptance of health care treatment regimens and the emitting of health-specific or illness-specific behaviors.

In addition to the applicability of conceptualizing health care delivery in terms of specific patient health care behaviors, health care delivery holds particular promise as an area of research because of its extreme significance in medical care. Independent of the development of new treatment modalities, the effectiveness of the treatment approaches can only be realized if the treatments prescribed can be correctly and immediately delivered to and accepted by those in need of them.

D. HOLISTIC HEALTH CARE AS A CHALLENGE TO HEALTH CARE PROVIDERS

Health care consumers and providers are increasingly recognizing some of the inadequacies of the present health care delivery system in the United States. Medical care, consisting primarily of detecting, diagnosing, and treating diseases, illnesses, injuries, and disabilities, is not dealing with or meeting the major health care needs of the general population.

Health care is not synonymous with medical care, although practitioners, providers, and consumers often equate the two. According to Rushmer (1975), health care is *"a condition for which the individual must take the prime responsibility himself. This simple precept has been frequently overlooked in the transition from the self-reliance posture of the past to the overly dependent posture of the present. Far too many members of our population tacitly assume that the medical profession will take care of their health care needs and that society in general will take care of their welfare needs. In this process we waste our largest untapped source or pool of health manpower, namely, the patient and his family."* The dependency on the medical profession for health-related services has resulted in a lack of self-sufficiency among health care consumers. Because of this, the important components of health care such as health maintenance, health promotion, and self-care are neglected in favor of treatment-oriented modalities of medical care. This aspect of health behavior and compliance has come about because of the magical powers we bestow upon our medical practitioners. This behavior is reflected in the manner in which consumers (patients), health care providers, and other allied health professions accept physicians as *"God-like beings."*

According to Illich (1976), health is: *"simply the everyday word that is used to designate the intensity with which individuals cope with their internal states and their environmental* *conditions. Therefore, health levels will be at their optimum when the environment brings out autonomous, personal, responsible coping ability in individuals. Health levels can only decline when survival comes to depend beyond a certain point on the heteronomous (other than self-directed) regulation of the organism's homeostasis. Beyond a critical level of intensity, institutional care - no matter if it takes the form of cure, prevention, or environmental engineering - is equivalent to systematic denial."*

A number of writers and researchers have emphasized the importance of individuals learning to cope with their own health. Many of them also have pointed out the critical role that individuals must play in improving their health behaviors. In *Doing Better and Feeling Worse*, Knowles (1977) discusses the responsibility that individuals have for determining their own health. He states that: *"the individual has the power - indeed the moral responsibility - to maintain his own health by observance of some very simple rules of behavior relating to personal health care habits, i.e., sleep; rest; exercise; diet; nutrition; use of alcohol, drugs, tobacco; coping with stress, and the use of selective medical examination and screening procedures, etc."* However, these very same factors that are noted above by Knowles are the health factors that are causing the American people the greatest problems with respect to their own maintenance of good health status.

Americans, in the past, largely abdicated personal responsibility for health care and delegated to physicians the care and cure of a wide variety of illness-related behaviors which, more properly, should remain the province of the individual to cope with or to handle. Only recently have health care providers and consumers become aware of the important part that the individual plays in affecting their own health and health behavior. The Holistic Health Care Movement has been one of the recent forces helping to bring this change about. As noted, the Holistic Health Care Movement is already exerting influence on both the health care and medical care delivery systems. Patients are beginning to become better informed about health health and illness, wanting more information about their health or illness status, seeking other alternative therapies to enhance their health, and are abdicating the role of being "passive participants" in their health care. In addition, many health care consumers and providers are beginning to accept the concept that health care delivery is more than just treating an ill or diseased body, that it should include treating the "whole person" (body, mind, and spirit), and therefore, our health care delivery systems should be holistically-oriented.

Because of these changing trends and influences in health care delivery, all health care professionals, regardless of specialty areas, will be affected by these collective efforts toward achieving more positive health behaviors. According to McKay (1980), if health care professionals are to be more responsive to these changes or trends in health care delivery, they will need to re-examine a number of areas of health care. These include:

1. the nature of the relationship between the provider and recipient of health/medical care,
2. the extent to which interdisciplinary teamwork is fostered,
3. the emphasis on prevention and health education,
4. the extent to which the health care practitioner is willing to evaluate the usefulness of alternative therapeutic modalities, and
5. the kind of role model the health care professional demonstrates.

Therefore, the Holistic Health Care Movement, while presenting changes and challenges to the traditional health care system, can be welcomed by health care providers concerned with improving the level of health and of health care services in the United States. The emphasis on personal responsibility and the power of the individual to be instrumental in changing their own health status - instead of depending solely on medical intervention by others - will involve all levels of health care professionals as they increasingly fulfill the roles of consumer/patient health care educators, humanitarian health care providers, and practitioners of caring and healing skills.

E. THE ROLE OF PSYCHOEDUCATION IN EDUCATING HEALTH CARE PROFESSIONALS

An early definition of psychoeducation stressed *"the teaching of personal and interpersonal attitudes and skills which the individual applies to solve present and future problems and to enhance his satisfaction with life."* (Guerney, et al, 1971) A more general and inclusive definition was recently presented by Ivey (1971), namely: Psychoeducation is *"a deliberate and planned effort to teach individuals or groups understanding, skills, or competencies in the area of human relations. The psychoeducation model is committed to providing people with the abilities required to manage their own lives in their own way."* Both definitions emphasize the motivational and attitudinal aspects of teaching people to care for themselves. This concept is readily applicable to preventive health care or the maintenance and promotion of health.

Appendix A

Although most health care services have been based on a remedial model where the patient does not seek health care until an injury or illness of some sort has been sustained, recently the concept of preventive health care has been receiving wider public and professional attention, with the emphasis being in the area of health education. This movemovement is exemplified by the many Health Maintenance Organizations and Wellness Clinics that advocate health maintenance and health promotion.

The concepts of preventive health care can be used by the allied health professionals and their various educational programs in several ways. With respect to the health care needs and consumer education needs of patients, there are three areas of health care practice and education where preventive health care concepts are applicable. These three areas, which illustrate the role of psychoeducational concepts and techniques in maintaining and enhancing health, rather than remediating disease or illness, are: direct patient care, personal development of the health care professional, and interprofessional cooperation.

The prevention of disease or illness has been generally approached from two standpoints. The *primary prevention or patient education model* has emphasized the "well clinic" concept, and the dissemination of health information through community health agencies and the public media. The *psychoeducation model* is more personal, since it provides for direct contact between the trainer (health care professional/health educator) and the trainee (patient/health care professional). In addition, it is aimed at more personal attributes such as attitude and motivation. The psychoeducational model also gives less attention to fighting disease or illness and places more emphasis on positive health and personal growth in wellness. The psychoeducational model is concerned with people setting their own health goals and using educational methods to help them achieve their objectives. The traditional *biomedical treatment model* dominates primary prevention techniques, whereas the psychoeducation model assumes "wellness" and is concerned with positive human development and the realization of potential.

The biomedical model tends to take the patient from a diseased state to a normal state of health using primarily physiological treatment techniques or modalities. The psychoeducational model takes the same patient from a diseased state to a point beyond the normal state of health called *"positive health"* (what Travis calls *"high-level wellness")*, and keeps him/her there by using physiological, psychological, and philosophical treatment techniques. The latter, from the standpoint of the total continuum of comprehensive health services to meet the health needs of the patient, has more to offer toward achieving this goal.

The psychoeducational model has application in three areas of allied health:

1. Direct Patient Care (i.e., teaching patients to clarify their own health values),
2. Personal Development (i.e., teaching health care practitioners psychoeducational concepts and principles that they can use and apply to their personal lives and individual practices), and
3. Interprofessional Cooperation (i.e., teaching health care professionals how to develop the spirit and practice of interprofessional cooperation in the development of personal growth needs and in meeting the health care needs of their patients). (Payton & Ivey, 1981)

F. FUTURE PROSPECTS FOR HUMANISTIC HEALTH CARE

The genius of the modern American health care delivery system is that it has become one of the most remarkable concentrations of science, technology, and medical art skills ever amassed. However, this technological success story may have deluded health care providers and their patients in their thinking to a loss that each has sustained amidst the overall triumphs in medicine, and that is the loss of the practice of humanism that is so important and integral to the underlying premises of health care delivery. As we contemplate medicine and health care practice in the 1980's, and our role in it as medical record practitioners, we should strongly support a continuous emphasis on the introduction of a consciously present humanizing program at every health care institution in this country. The forces which are imposing dehumanization in hospitals and other health care facilities can be modified, if these forces are first understood and then acted upon.

Although the concept of dehumanization is not explicitly defined in health care literature, it has many common connotations that can be grouped into five identified problem areas: (1) the perception of people as objects rather than as humans, (2) the instrumental use and exploitation of people without their knowledge or consent, (3) the coldness and indifference in social interaction within the medical treatment setting, (4) the repression and limitation of human freedoms and needs, and (5) the social ostracism and alienation of the patient from contact with other patients, family and friends, etc., in the medical treatment setting. (Howard, 1979)

Humanized care, on the other hand, has been defined by Howard as *"care that enhances the dignity and autonomy of patients and health care professionals alike."* To convey or to give full meaning to this concept, Howard specifies the factors that are the necessary and sufficient conditions for humanized care.

In a humanizing medical environment Dr. Howard states that patients: (a) are perceived as unique and irreplaceable whole persons who are inherently worthy of the health care provider's concern, (b) share in the medical decision-making process to the extent of their capacity for those decisions that affect their health or health care, (c) have relationships with the health care providers that are equalitarian (egalitarian) or reciprocal and not deferential or patronizing, (d) function as autonomous persons who have a right to control their own destinies within the limits imposed by their illness and the rules that protect society, and (e) are treated with empathy and warmth by their health care providers.

It has also been argued and suggested that the same ingredients noted above for humanized patient care are also necessary for the humanization of health care providers. Despite the service ethic of their particular health profession they must not be exploited as *"servants"* by their supervisors, colleagues, or patients. If the health care providers themselves are dehumanized, then they may find it difficult to treat their patients or clients humanistically, especially those who are critically ill and who cannot communicate or reciprocate through kindness.

The American health care system is perhaps the nation's largest service industry, and like other industries it reflects the ethical values, goals, and organizational structure of the larger society. However, the health care system also has an independent set of ideals and goals that are based on established humanitarian principles. The contrast between these principles and antihumanitarian practices observed in many medical and hospital settings are a cause for concern among many health care professionals, patients, health care policymakers, and the general public (consumers).

This national concern was explicitly expressed by the American Hospital Association in 1972, when it recommended to its members a statement on the *"Patient's Bill of Rights."* The promulgation of these rights (i.e., to be treated with respect, to be informed about procedures, to protect the confidentiality of their medical records) acknowledged the fact that all patients have important needs (health, personal, and social) that extend beyond the specific professional health or medical care services for which they may enter a hospital or health care facility. It is consistent with the humanistic spirit of the various health care systems that an association should formally recognize the legitimacy of *"patient rights"* and take steps to protect them. It would also not be inconsistent for the American Medical Record Association to also endorse the *"Patient's Bill of Rights,"* since all of the patient rights promulgated by the American Hospital Association are likewise accepted and professed by most members of our own medical record profession.

As noted previously, the psychosocial elements and related factors that are essential to humanistic health care apply equally to both patients and health care professionals. A successful commitment to a humanistic health care environment would result in health care professionals giving patients higher quality and more personalized health care and other services. Patients would be treated with greater courtesy, sensitivity, compassion, and empathy. Patient's rights and responsibilities would be clarified and protected. Patients would be involved with their own health care in a more active manner, possibly resulting in better and faster recovery, reduced health care costs, and improved patient satisfaction with the health care services received.

G. HEALTH CARE GOALS FOR THE YEAR 2000 AND BEYOND

In stating goals and objectives for patient health care needs, as well as determining the methods by which these goals and objectives will be achieved, one must look at general principles involved in designing and implementing primary health care programs:

1. that primary health care must be appropriate to local conditions,

2. that commitments to the objectives of primary health care must be compatible at all levels of health care delivery,

3. that health goals and objectives must be translated into activities with measurable goals, and

4. that the primary health care system is an organism in which each part must perform its allotted task in coordination with all the other parts of the health care system (Habicht, 1981).

A review of these four principles indicates what factors need to be considered in planning health care programs and systems for the future. Health care programs and systems cannot be extrapolated from one situation or setting to another with any great success because the variables of each are too different because of time, place, and other factors. Each situation is unique because the individuals and institutions involved are unique. All planning of health care programs and systems needs to consider the behavioral aspects of health care consumers and providers. Only in this way will we be able to have success in identifying and achieving our health care goals and objectives for the future.

H. CONCLUSIONS

Health and health care in the 1980's will be the function of self-responsibility and authority. These two elements are the main components of good personal health and health care management. There will be a need to instill self-responsibility and positive health attitudes and behaviors in individuals in order to reduce their over-dependency on the traditional medical care treatment system. There will be a need to replace this dependency with an interest in and emphasis on the holistic and wellness approaches to health. This will necessitate changes in our belief systems, the way we think about health and health care, and how we go about seeking positive health, wellness, and health care. This will mean that all patients and health care consumers will have to be encouraged to participate actively in their own health care and to become partners with the health care professionals in the services provided to them. Health is something that individuals must develop for themselves, not have provided for them.

In order to accomplish this altruistic health care goal by the year 2000, there will be a need to change life styles, health care policies, and the other factors which have kept the traditional biomedical treatment model from being more successful. There will also be a greater need for health care professionals and institutions to explore the psychoeducational and psychosocial aspects of health and health care delivery in order to be assured that the services provided will meet the needs of the total patient, and be provided on a continuum. In addition, there will be a greater need to recognize the patient as a person deserving individual recognition, and humane, "caring" health care, and not a disease entity or problem

Health care institutions and professionals also have an obligation to improve the quality of human life. The provision of "caring," humane, and appropriate health care will ensure that patients and consumers of health care will continue to be the beneficiaries of modern medical technology and not its victims. In summary, health care institutions and professionals should add the quality of "caring" to the process of "curing" those patients who have entrusted their health and themselves to health care facilities. In so doing, we enhance the lives and well-being of all concerned, and we improve the quality of health and health care in the process.

II. THE HEALTH CARE FIELD AND ITS INSTITUTIONS

A. Introduction

The traditional system of health care delivery is undergoing considerable change, influenced by a number of factors which have impacted upon the delivery of health care to the general population.

Historically, hospitals have been regarded as places where people (patients) went to die, rather than to get well. Fortunately, this is no longer the case and today hospitals are among the most complex and dynamic institutions in our society, providing the latest advances in medical care. The hospital is also generally thought to be the center of the health care delivery system, technologically providing health care services that are virtually unmatched by any other country in the world.

The health care field and the delivery of health care services has become one of the largest and most complex industries in the United States. Serious questions about the overall cost and benefits derived from our traditional health care delivery system are being considered. In particular, does the quality of health care services provided keep up with the cost and quantity of health care services available? This question needs to be addressed by all health care industry professions and especially the medical record profession since they assume responsibility for the implementation of quality assurance and other assessment programs to improve the quality of services delivered, while controlling and containing the costs of the services.

B. Definition of "Health"

In order to better understand the forces influencing health care, one needs to have a useful and workable definition for the term "health". The World Health Organization (W.H.O.) defines "health" as a "state of complete physical, mental, and social well-being, and not merely the absence of disease." (WHO, 1980) There may be disagreement whether this is a useful definition, because it presents what might be considered an unattainable and unmeasurable ideal. It is, nonetheless, a desirable objective for the health care industry. "Health" is indeed a comprehensive concept which takes into consideration the complete physical, mental, and social well-being of the patient.

When one considers the traditional biomedical treatment model, and the traditional health care delivery system, one can see that they have frequently fallen short of providing health care services that meet the complete physical, mental, and social well-being needs of most patients. An alternative approach to defining "health", which might be closer to achieving the goal of meeting all the well-being needs of the patient is the "ecological" definition of health. This defines "health" as a "state of optimal physical, mental, and social adaptation to one's environment." For example, an individual with a chronic disease, such as arthritis, can never return to a state of complete well-being, but certainly can adjust and adapt quite adequately to the environment through health care and acceptable life style adjustments. The "holistic health movement" and the "hospice movement" are two ways in which some health and allied health professionals are trying to influence and change the traditional medical treatment model and health care delivery system. In these two movements, medical record practitioners may help overcome the limitations and restrictions of the traditional medical treatment model and the health care delivery system by keeping their minds open to new concepts and ideas in health care delivery services, and by participating in continuing education seminars and workshops which seek to promote the broader view of the patient as a "whole" person, and not just a disease entity.

C. Factors and Forces Influencing Health Care:

Blum (1974) in his "Inputs to the Health Spectrum", lists four factors affecting the psychosocial (emotional and mental) and somatic (physical) health of individuals: (1) environment (climate, pollution, topography, sociocultural elements, political conditions, educational facilities and services, and occupational conditions), (2) behavior (attitudes and habits, physiological responses to personal emotions, and psychological responses to physical symptoms), (3) heredity (personal resistance to disease, ethnic or cultural predisposition to certain diseases, and genetic counseling or family planning for those individuals with a history of congential anomolies or birth defects), and (4) health care services (community health, health promotion, health prevention, health cure or treatment, rehabilitation or restorative treatment, and custodial care). These four factors in turn influence one another through the mechanisms of Ecological Balance, Natural Resources, Population Characteristics, Cultural Systems, and Mental Health.

D. Responsibility for the Delivery of Health Care Services

The responsibility for the delivery of health care services in the United States is fragmented among environmental, public, and personal health care groups and can be described as diverse, fragmented, and pluralistic in nature. There have been attempts to integrate these health care delivery systems, but without success. Traditionally, public health has been the responsibility of the government or of governmental agencies and personal health has been the responsibility of the individual and the health care providers (primarily physicians). Environmental health, on the other hand, has been the responsibility of all concerned: the government, the health care providers, and the individual.

Public health services are concerned with the general population and traditionally have included such services as: communicable or infectious disease control, maternal and child health care, public health education, public health nursing, sanitation, and vital statistics.

Environmental health programs and services also relate to public health and are carried out through the auspices of both governmental and private agencies. They include such services as: air, noise, and water pollution control, solid waste disposal control, housing and land use control, insect and rodent control, and occupational health and safety control.

Personal health care services are usually provided by physicians and other health care professionals, hospitals, clinics, and nursing homes. They include such health care services as: health promotion, disease prevention, health cure or treatment, rehabilitation or restorative treatment, and long-term or custodial care.

E. Personal Health Care Delivery: Objectives and Perspectives

There are a number of ways to classify and evaluate the objectives for the delivery of personal health care services. Donabedian (1973) suggested four perspectives in considering the objectives: (1) the Client-oriented (patient's) perspective which includes access to health care services, use of health care services, quality of health care services, and freedom of choice in selecting health care services; (2) the Provider-oriented (physician's, hospital's, clinic's) perspective which includes freedom of professional judgment, maintenance of professional proficiency, and maintenance of professional norms; (3) the Organization-oriented (health facility's) perspective which includes cost control, quality control, high efficiency, patient or client support, medical staff and employee support, and community support; and (4) the Collectively-oriented (other views) perspective which includes the proper allocation of health care resources, non-partisanship, political representation, and cooperation and coordination with other health and non-health care agencies and organizations.

A more comprehensive list of standards upon which to evaluate the goals and objectives of the delivery of health care services has been suggested: (1) high-quality technical services which in the health care field generally means "optimal" health care or the best health care possible depending upon the resources available; (2) accessibility and availability of comprehensive health care services which means that health care consumers should have access to a broad scope of health care services whenever and wherever required; (3) efficiency to the health care provider which means that the provider should promote maximum effectiveness while conserving limited health care resources; (4) satisfaction for the health care consumer which means that the health care provider should take into account the needs of the client or patient with regards to the individual's self-respect, dignity, and comfort; (5) efficiency for the health care consumer which means that the client or patient should receive maximum effectiveness from the health care services provided while conserving the patient's limited resources of time and money; (6) satisfaction for the health care professional which means that each member of the health care team should have the satisfaction of providing quality of health care services while at the same time achieving their desired goals and objectives; and (7) accountability which means that the health care team and the health care institution should be accountable to some appropriate body to ensure that the health care services provided will effectively achieve the health care goals and objectives of all concerned. (Schulz and Johnson, 1976)

F. Basic Models of Current Health Care Delivery Systems

There are many existing models for the delivery of personal health care services. As a rule, each of the systems described here is interested only in its own particular component function within the broad spectrum of the health care delivery system.

1. Solo practice physicians - The predominant model, although diminishing in number. Accessibility to comprehensive health care services is potentially greater under this model because solo practice physicians usually recognize their limitations in providing comprehensive health care services and make referrals to the specialty physicians or health care facility needed by the patient. They are not under pressure, as are physicians in the multispecialty groups, to keep patient referrals within the group. Practice usually centers around the acute care hospital.

2. Single-specialty group practice physicians - This model of practice is the fastest growing of physicians' organizational groups. This single-specialty group model resembles the solo practice model in its impact on the health care delivery system and the hospital. Quality control measures are likely to be higher in a group practice than in an individual physician practice. The single-specialty groups, like solo practitioners, tend to center around the hospital for ancillary health or medical services and for referrals to other specialists. The hospital tends to serve as the unifying

core for comprehensive health care services for both the solo practice and the single-speciality group practice models.

3. Multispecialty, fee-for-service group practice physicians - In this model, the hospital mainly provides inpatient services since the multispecialty group has the capability of providing diagnostic and treatment services on an ambulatory, out-patient basis. High quality technical services and accessibility to comprehensive specialty services are a distinct advantage of the multispecialty groups and they tend to be found more frequently in medium-sized communities. A serious disadvantage of this model is the pressure to keep the patient "within the group" when it might be to the patient's advantage to be referred to someone outside the group practice.

4. Prepaid multispecialty group and hospital plan - This model includes the prepaid or H.M.O. programs, which hold promise for combating rapidly rising health care costs. They have been widely promoted by federal agencies, consumer groups, and labor unions as the possible answer to our health care delivery system problems. The prepaid plan model comes the closest to providing truly comprehensive health care services on a continuum. A patient's single health (medical) record for all health services is an important advantage of this system, since health services among the various specialties are coordinated. The only serious problem with this model is that the patient is kept within the system. The patient's level of satisfaction tends to be low because they have lost the freedom to choose a physician or a hospital which will provide the necessary health care services.

5. Public health service to indigents - This model includes those public health care facilities which provide services to the indigent and are funded by city or county revenues. These facilities include charity-type inpatient and outpatient health care facilities. This model usually achieves its health care goals and objectives to a lesser degree than the other health care models discussed. They also tend to be less well accepted by their patient clientele because of the "indigent stigma" that is attached to receiving health care services from these types of facilities.

6. Neighborhood health centers - This health care service model is primarily funded from federal sources. They have been established to provide health care to the urban and rural disadvantaged. While this type of center may provide comprehensive ambulatory personal health care services to the neighborhoods they serve, many have to rely on the local, indigent hospital for inpatient health care services, thereby

interrupting the concept of comprehensive health care services on a continuum. This type of center tries to maximize the health care team approach, and the promotion of personal health and environmental health standards is a major goal. Patient satisfaction tends to be high because the facility is located in their neighborhood. (They possess a sense of pride in having their own neighborhood health care center).

7. Rehabilitation or restorative care centers - These types of facilities are generally associated with large metropolitan medical centers, or large university teaching centers or hospitals. Their primary goal is to help make useful citizens again of those with disabling conditions. The health care services provided tend to be behavioral and rehabilitative medicine-oriented. They are not usually comprehensive in nature, except as may be available to them through the affiliated medical treatment center or complex.

8. Long-term care facilities and nursing homes - This group of facilities includes those facilities which provide long-term care services for those who are chronically ill or require custodial care services due to age or debilitation. Because of the increasing life span of individuals in the United States, there will be an increasing need for these types of health care facilities in the future. (This is due to the growing size of the older adult population who will need more health care services).

9. Hospices - This category of health care facilities has just recently become part of the health care delivery system in the United States, although the types of services provided by them are not new. The purpose of hospices is to provide health care services that meet the physical, mental, and spiritual needs of patients who are terminally ill. This type of health care service is very difficult to provide in the traditional health care delivery facilities. Hospices may be the health care facilities of the future for the terminally ill.

G. Health Care Issues for the 1980's

Many factors have influenced the health care industry. We can use the current factors influencing the health care delivery system in the United States to try to present a general frame of reference within which health care services will be delivered in the 1980's. The past development of health care services in this country suggests that there are not likely to be any sharp historical discontinuities in the near future. It can be suggested that the 1980's will be characterized by the following problems:

1. cost of financing adequate versus optimal health care

services for the various segments of the general population, particularly the sick poor and the elderly;

2. delivery of health care services to a much broader and more diverse mix of patients and patient needs within the general population, particularly sick poor, the elderly, and the military;

3. further growth and expansion of technology and automation in the delivery of health care services, particularly as it relates to health care costs and the further dehumanization of health care services;

4. need for better trained managers and administrators at all levels within the health care industry in order to meet and to deal with the many challenges which lie ahead for the health care industry; and

5. need to provide more and better patient health education services in order that the health care consumer can more effectively utilize the health care services available to him within his available time and money resources.

H. Conclusion

The delivery of health care services in the United States and the system which provides these services is complex, dynamic, and varied. There is a great need for a strong commitment from all health care professionals involved in the delivery of health care services in order to make the system work. As health care professionals, we must remember that our primary goal is to provide the necessary health care services to the sick and disabled, and that in achieving this overall goal we achieve our own individualized goals and objectives.

III. THE MEDICAL RECORD PROFESSION

A. How Professional Practice is Carried Out

The medical record practitioner is the health care professional responsible for organizing, managing and providing medical record and health information services, who practices his/her profession within health care delivery institutions of many and varied types designed to meet patient health care needs, in close association with other health care professionals, with the purpose of improving the quality of medical care through comprehensive health information services.

B. Definition of a Profession

The question has been raised, "Is medical record administration really a profession?" One definition of a profession was developed by Flexner in 1915, which is generally accepted and has endured well. In this definition he stresses four essential characteristics:

1. Professional activities have a large intellectual component; the skill, craftsmanship, or practice of a profession rests on a body of knowledge. This knowledge is not only empirically derived, but is also a product of research or scholarly activity.

2. The practice of a profession involves a craftsmanship, meaning knowledge is put to use; this craftsmanship is teachable and learnable, and is socially useful.

3. Society allocates to those who practice a profession a great measure of control of the education for it and the right to be self-policing. The quality of professional service, it is presumed, is to be judged only by other professionals in the same field. Hence, a profession is governed by a code of ethical conduct, to which its members are held and the professional person is presumed to be basically motivated by altruism.

4. The professional practices his craftsmanship in terms of professional judgments of his peers.

The application of the term "profession" to medical record administration is appropriate. It has a specialized body of knowledge which is teachable and learnable; a service which is socially useful; a code of ethical conduct accepted by the profession; and a system for self-policing based on peer judgment through the Ethics Committee of the professional organization.

C. Medical Record Personnel

There are two major categories of credentialed (certified) medical record personnel--the Registered Medical Record Administrator (RRA) and the Accredited Medical Record Technician (ART).

Medical Record Administrators have administrative responsibilities for medical record and health information services including administrative and clinical data and health records - planning and developing medical record systems for varying types and sizes of health care facilities to meet standards of accreditation and regulatory agencies; assisting the medical staff in evaluating the quality of patient care; collecting and analyzing patient care data; developing policies and procedures for medico-legal uses of records and providing consultant services. The medical record administrator combines knowledge of health care, health records, information management and administration, to provide services which meet medical, administrative, legal, ethical, regulatory, and institutional requirements of the health care delivery system being served. Educational programs for medical record administrators are at the baccalaureate and post-baccalaureate levels. Through a national registration examination provided by the AMRA, they are credentialed as Registered Record Administrators (RRA).

Medical Record Technicians work as assistants to medical record administrators and as independent practitioners, responsible for the technical operations of medical record department services, supervising the day to day operations, reviewing medical records for completeness and accuracy; coding and classifying diagnoses and therapies; developing statistical reports, and transcribing medical reports. Educational programs for medical record technicians are at the Associate Degree level in formal academic settings or through the AMRA Independent Study Program. Graduates of accredited programs are eligible to apply for credentialing by the AMRA as Accredited Record Technicians (ART), through a national certifying examination.

The major work area for medical record personnel - RRAs and ARTs - is within the health care delivery system, in general, and specialty hospitals, ambulatory health care facilities and outpatient clinics, rehabilitation institutions, skilled nursing facilities, health meaintenance organizations, health departments of governmental agencies, insurance companies, regional data systems, and in private industry.

The health care institutions in which the medical record practitioner works are sensitive to pressures from many factors --economic, social, political, and technological, which are in a constant state of change. Health care services are vital to all segments of the population, and change in any aspect of these services has wide-spread effects. Awareness of the certainty of change and the directions it may take is essential for health care practitioners, who need to plan for continuity of services in a changing environment.

D. The Professional Organization

1. The American Medical Record Association - Structure and Services

The national professional organization in the medical record field is the American Medical Record Association

(AMRA) with headquarters at 875 N. Michigan Avenue, Chicago, Illinois 60611.

The association was founded in 1928 and has grown to an organization of 24,000 members in 1981. The active members represent two levels of professional practice, medical record administrators and medical record technicians. Fifty-two component state organizations have been formed in the United States, Puerto Rico, and Washington, D.C. and many local and regional organizations have been formed which provide additional opportunities for members to meet for professional growth and improvement.

The expressed purposes of the AMRA are to "promote the art and science of medical record administration and to improve the quality of comprehensive health information services for the public welfare."

The AMRA is governed by an elected Board of Directors. A House of Delegates, consisting of elected representatives from all component state organizations, and the AMRA Board of Directors, is the legislative and policy making body of the Association. The administration of the Association's programs of service to members is carried out by an Executive office staff headed by an Executive Director and organized in four divisions--Executive, Academic, Continuing Education, Independent Study.

The Association publishes a professional Journal and a newsletter and provides an ongoing series of workshops and seminars for the continuing education of members.

In collaboration with the American Medical Association and through the AMRA Academic Division and Council on Education, the professional organization conducts a program of accreditation of educational programs for medical record personnel to assure that they meet established standards.

The Independent Study Division offers an Independent Study Program in Medical Record Technology which is accredited by the National Home Study Council and has been evaluated by the American Council on Education as equivalent to 30 semester hours of collegiate credit. Those who complete the Independent Study Program in MRT education and earn an additional 30 semester hours of academic credit in specific subject areas are eligible to take the national certification examination for Accredited Record Technicians.

The Continuing Education Division conducts educational seminars, workshops, and institutes throughout the country to keep members informed about current medical record practice. It maintains the records for the AMRA mandatory Continuing Education program, which requires that ARTs and RRAs complete a designated number of hours of approved educational programs related to professional practice, every two years, in order to retain their credentials.

The Executive Division includes the functions of membership, legislative affairs, administrative, personnel, finance, and computer services, as well as state association liaison activities; grants management, publication of the official Journal of the AMRA; administration of the national credentialing examinations for ARTs and RRAs, and the Foundation of Record Education. The Foundation of Record Education of AMRA (FORE) is a non-profit corporation whose purposes are to maintain a professional library, provide funds for student education, and engage in research and information dissemination pertaining to the medical record field.

The Foundation has a professional reference library for member's use, and a program of low-interest loans to medical record students enrolled in accredited educational programs.

2. Influence of the Professional Organization on Professional Practice

The professional organization identifies the roles and responsibilities of members of the profession, and defines levels of practice through research studies. It sets professional practice standards and provides certification examinations for entry-level practice at the ART and RRA levels.

Through its membership program, the professional organization provides a forum for discussion and resolution of professional practice concerns, and an opportunity for mutually beneficial cooperative efforts among individuals, and local, state, and national organizations to improve professional services and assist members in their work.

In its various component divisions the Professional Association acts as a national and state spokesman for the profession on professional practice policies and provides an identifiable center for professional activities.

The AMRA has established a Code of Ethics for professional practice and interpretive guidelines for the information of practitioners and other health professionals.

3. Influence of the Professional Organization on Professional Education

The AMRA has established and published a philosophy of education for the profession. See Section IV - Frame of Reference.

It has established quality standards for professional educational programs, in collaboration with the American Medical Association.

The Council on Education of the American Medical Record Association and the Committee on Allied Health Education and Accreditation of the American Medical Association (CAHEA) and the AMA Council on Medical Education, develop and approve standards or "Essentials" for accreditation of educational programs at the Associate Degree level for Medical Record Technicians and at the Baccalaureate Degree and Post-baccalaureate level for Medical Record Administrators.

The AMRA establishes quality standards for Continuing Education programs to enable members to keep up-to-date in their professional knowledge and skills. Standards are used to approve programs for continuing education credits.

Through the Academic Division the AMRA conducts an ongoing program of accreditation of educational programs for medical record administrators and medical record technicians, in collaboration with the Department of Allied Health Education and Accreditation of the American Medical Association. The AMRA Academic Division also provides teacher education programs for medical record educators. It develops educational materials and guidelines for educational program planning and development including administrative planning manuals and guides, and course outlines, and provides consultation assistance to developing and existing programs.

The Independent Study Division of AMRA provides an Independent Study Program in Medical Record Terminology available by correspondence for employed medical record personnel.

Through its Continuing Education Division AMRA provides a national series of Continuing Education workshops and institutes for practitioners.

AMRA also conducts educational and professional practice research through its professional services staff.

IV. PHILOSOPHY OF PROFESSIONAL EDUCATION

A. The Practice Base

The basic philosophical concept of professional medical record education is that the requirements of professional practice form the basis for curriculum development for the education of medical record practitioners; that is, professional curricula should be practice-based, focused on entry-level responsibilities and competencies.

Professional practice considerations include the medical record and health information services which medical record practitioners provide, the health care delivery facilities in which practice occurs, the interactions with other health care professionals, the changing structures of the health care delivery system, for which medical record services must be developed, changes in the technology of information management, changes in the technology of information management, changes in the economic and political situations, and changes in societal values and perceived needs for health care, which dictate the types of medical and health care requested by patients or provided to them.

The rationale for competency-based curriculum planning for education in the medical record field is that medical record education is responsible for preparing medical record administrators and medical record technicians to practice successfully their profession of organizing, managing, and delivering medical record and health information services, wherever required in the health care delivery system.

The major goal of a competency-based curriculum in medical record education is the preparation of the beginning level or entry-level generalist medical record practitioner -- medical record technician or administrator.

Medical record practice requires that the practitioner have a body of professional knowledge; conceptual skills such as analytical and problem solving skills; technical skills in the development and maintenance of medical record and health information systems; human relations and managerial skills; and professional judgment.

In addition to the cognitive elements needed for professional practice (facts, concepts, understandings, and intellectual skills) whose development must be provided within a professional curriculum, the curriculum plan must incorporate strategies for development of the skills essential for the competent practitioner, as well as the attitudes and values that are an appropriate and integral part of professional practice.

The design, implementation, and evaluation of a competency-based professional curriculum involves identifying roles and responsibilities of practitioners, defining the specific behaviors that competent practitioners must exhibit, designing instructional strategies to help students achieve the specific identified behaviors, evaluating at each step to determine whether the student has acquired the behaviors, and, on a continuing basis, using data from evaluations as feedback to modify the curriculum plan and increase its effectiveness.

B. AMRA Educational Philosophy

In 1970, the Education and Registration Committee of AMRA (now the Council on Education), developed a statement of Education Philosophy for the AMRA, to emphasize principles which the Committee felt were necessary for quality education in the field. The statement was subsequently approved by the Association's Board of Directors and is quoted below:

EDUCATIONAL PHILOSOPHY OF THE AMRA

STATEMENT OF PURPOSE:

The purpose of this statement of Educational Philosophy is to emphasize principles which will provide quality education for medical record personnel to enable them to make significant contributions toward the improvement of patient care.

PRINCIPLES:

1. Formal educational programs for Medical Record Personnel are best provided by regionally accredited, collegiate educational institutions, combined with clinical instruction in appropriate health care institutions.
2. Clinical instruction and directed experience are integral parts of the total educational program for health professionals.
3. Clinical instruction and directed experience should be awarded credit toward institutional requirements for degrees in the health professions.
4. The AMRA encourages academic arrangements which facilitate horizontal and vertical career mobility for the individual. Educational design should be developed and integrated at all levels so as to allow progression from the lower to the higher levels of achievement within individual professions.
5. The members of the health team who will work together as professionals should learn together. Students in the health sciences should share courses which provide a common background of knowledge of the health field.

continued

EDUCATIONAL PHILOSOPHY OF THE AMRA

PRINCIPLES:

6. Formal and informal continuing education is recognized as an essential component of professional development for health personnel. It is the task of the professional organization to assist and encourage employers and employees to participate in and support programs of continuing education.

C. Allied Health Educational Philosophy

The medical record practitioner is one of many allied health specialists who assist in the care of patients. The definition of allied health personnel endorsed by the National Commission for Allied Health Education is quoted here:

> "All health personnel working toward the common goal of providing the best possible services in patient care and health promotion."

While there have been many studies of education for the major health professions - Medicine, Dentistry, Pharmacy, - educational programs for the allied health professions have not received national attention until the last 10-12 years. This recent focus on the allied health professions appears to have been strongly influenced by two national movements - the first, the development of Schools of Allied or Associated Health Professions within university administrative structures; and the second, the founding in 1967 of a national organization for allied health professionals and professional associations - The American Society of Allied Health Professions. These two movements focused the attention of governmental agencies concerned with health care, and the health care field itself, on the numbers and variety of health care professionals serving the health of the nation.

From 1978-1980, the first comprehensive study of educational programs for the allied health professions (including the medical record profession) was conducted by the National Commission on Allied Health Education with support from the W. K. Kellogg Foundation following a plan developed by the ASAHP. The report of the Commission, entitled Alliance for the 80's - Report of the National Commission on Allied Health Education, has great significance for all allied health educators.

The conclusions of the Commission included the following basic philosophical themes:

1. Allied health personnel provide essential health care services.

2. Formal allied health education is prerequisite to the provision of a competent and sufficient health work force. Formal education can take place in collegiate as well as noncollegiate institutions.

3. The primary purpose of allied health education is to prepare the student for health service. Educational processes must be related to practice needs and viewed as a means for achieving standard performance objectives. The right to practice should be based on achievement of these performance objectives, rather than on receipt of an academic degree. The educational institution - collegiate or noncollegiate - has the responsibility of preparing students to meet these objectives.

4. Diversity in educational programs and settings is essential for meeting rapidly changing health service needs. A monolithic approach to allied health education is unrealistic and would result in stagnation. However, wasteful duplication of effort must be avoided through better communication, cooperation, and collaboration.

5. The educational process for health occupations should place the interests of the public and the student above special interests of the educational institutions and professional groups.

6. Information and resource-sharing are essential. There are lessons to be learned from innovations of the past decade.

7. The time has come for coordination, collaboration, and cooperation in education and service. There is need for a new spirit to forge alliances and move forward together.

Building on these themes, the Commission developed fifteen primary recommendations which are repeated here as an important segment of the philosophical component of the frame of reference for medical record education. The recommendations cut through all aspects of curriculum planning, implementation, and evaluation for professional educational programs for the allied health disciplines and form a blueprint for strengthening program quality.

Primary Recommendations NCAHE

1. Alliances in service and education should be strengthened, based on an appreciation of the interdependence of all health occupations and an understanding of their roles, functions, and special contributions.

2. Education should be linked to practice through role delineation.

3. Allied health education should prepare students who can meet standard performance objectives and adapt to changing health service needs; flexibility in methods of preparation should be encouraged.

4. To meet new service demands, all allied health education programs should include the study of (a) human values, (b) illness prevention and health promotion methods, and (c) delivery systems, including roles and functions of health personnel, patients' rights, legal risks, cost-effectiveness, and quality control.

5. In the future, new health service needs should be met, where possible, without establishing new occupations and programs; unnecessary expansion of entry-level requirements should be controlled.

6. The importance of continuing education should be recognized and networks should be established to ensure collaboration and information sharing on continuing education matters.

7. Clinical and didactic education should be better integrated, and the range and types of clinical education sites and methods should be expanded to meet new health service demands.

8. Research in clinical education methods and theory must be greatly expanded.

9. The development of leadership in the clinical, managerial and educational areas should be a priority for allied health education.

10. Support for research in allied health education should be substantially increased, and allied health faculty should be encouraged to strengthen their commitment to research.

11. Educational institutions should strengthen their efforts to increase the representation of minorities and women in leadership positions.

12. The establishment, expansion, and termination of allied health programs should be based on manpower requirements, adequacy, and efficient use of available resources, and collaboration within and among educational and other institutions.

13. Educational and collaborating institutions should adopt mechanisms to facilitate the removal of unnecessary barriers to student progress.

14. Information relating to administration and planning in allied health education should be collected and shared systematically.

15. Significantly increased funding for allied health should be provided at the federal, state, and local government levels and from private resources.

Program faculty should be aware of the contents of the statement of philosophy of medical record education promulgated by the AMRA, and the philosophical themes and recommendations of the National Commission on Allied Health Education Study. These tenets should be kept in mind in planning professional educational programs for medical record personnel.

V. ROLES AND RESPONSIBILITIES OF MEDICAL RECORD PRACTITIONERS

What practitioners do has traditionally formed the basis for organization and development of educational programs in the medical record field. A pragmatic approach to the education of medical record practitioners was taken early in the history of the profession, when learning on the job was the only way to enter the field. The first educational programs were hospital based in-service training programs, many provided on a one-to-one basis, with the department head serving as mentor and supervisor. The earliest formal education programs were hospital based certificate programs. In 1934, the first educational programs for medical record librarians were approved by the professional association -- three hospital certificate and one baccalaureate degree program. In the first baccalaureate program, students spent their senior college year in what was essentially a hospital certificate program in medical record science, which provided formal courses in medical record procedures and practical experience in a medical record department following three years of preparatory liberal arts, sciences, and business courses.

In 1957, the first formal research project on professional practice in the Medical Record Field was commissioned by the AMRA and conducted by the University of Pittsburgh School of Public Health.

The study, entitled "The Functions and Education of Medical Record Personnel", identified eight major functions and appropriate specific functions of medical record practitioners (Medical Record Librarians and Medical Record Technicians). The report suggested curriculum structure and content for educational programs for both levels of medical record practice.

In 1973-75, the AMRA conducted "A Study to Delineate Roles and Functions of Medical Record Personnel". One report which resulted from this study, entitled "Eighteen Years of Change - 1957-1975", was known as the "Pittsburgh Update." The update verified the same functions as the 1957 study (with the addition of data processing) and identified two levels of practitioners, the Medical Record Administrator and the Medical Record Technician. This study also identified five roles common to both categories of practitioners: administrator, supervisor, technician, consultant, and other (transcriber and clerk).

In 1978, AMRA conducted a third study to "Review and Verify Roles and Functions of Medical Record Personnel". This study, based on the Roles and Functions project of 1973-75, identified and verified nine role/responsibility areas common to both groups of practitioners (RRA and ART): (1) Management; (2) Legal Aspects; (3) Personnel Administration; (4) Health Information System; (5) Health Care Records; (6) Information Storage and Retrieval; (7) Health Statistics; (8) Quality Assurance Systems; and (9) Classification and Indexing Systems. Within these nine major role/responsibility areas, the study verified 44 specific responsibilities for the RRA and 43 specific responsibilities for the ART.

In 1981, the Educational Resource Document (ERD) Project undertook a limited update of the major roles and specific responsibilities statements for entry-level generalist ARTs and RRAs, resulting from this 1978 verification study, and included a special study to determine affective characteristics critical to the profession. The results of this limited update are included in Chapter 2 of the ERD. The nine major role/responsibility areas were confirmed and specific responsibility statements were verified--62 for Medical Record Technicians and 100 for Medical Record Administrators. A special report on critical Affective Characteristics for medical record practice is included in Chapter 3.

Another approach to identifying major areas of professional responsibilities and competencies was taken by Hanken (unpublished paper, 1980) in which she relates critical competencies in medical record professional practice to the particular professional role assumed by the practitioner in the practice situation, and identified five general domains of activities or responsibilities within the generalist role.

The generalist role of the MRA practitioner is described as a manager, director, or administrator of medical or health record services, which encompasses within that managerial role needed competencies in five domains:

1. Interpersonal Domain - Leadership, Communication, Personnel Management, Supervision.

2. Quantitative Domain - Health Care Statistics, Budgeting, Data Gathering.

3. Analytic Domain - Systems Analysis, Planning, Organizational Analysis.

4. Interorganizational Domain - Interdepartmental Relations, Legal Aspects, Health Care Economics, Public Relations.

5. Administrative Domain - Administrative Theory and Practice, Health Information Science, Information Technology, Data Security.

The 1980 revision of Essentials of an Accredited Educational Program for the Medical Record Administrator includes competencies which correlate well with the major responsibility areas for RRAs identified in the previous AMRA Roles and Functions and Role Verification studies and in the 1981 update. Major Responsibility areas I thru IX - are listed after each general competency statement.

The Essentials state that upon completion of a medical record administration program, the entry-level medical record administrator should be able to:

1. Plan and develop a health record system appropriate for varying sizes and types of health care facilities, organizations, and agencies. (IV Health Information Systems)

2. Manage the personnel working in a health record department. (III Personnel Administration)

3. Perform the following management functions as they relate to a health record system: facility design, financial planning, budgetary control, selection of equipment and supplies, systems analysis and evaluation of the effectiveness of departmental services. (I Management)

4. Develop and implement policies and procedures for information handling and dissemination in accordance with professional ethics and in conformity with applicable federal, state, and local statutes and regulations. (II Legal Aspects)

5. Design a system to maintain the privacy and confidentiality of health information. (II Legal Aspects, VI Information Storage and Retrieval)

6. Develop, analyze, and evaluate health data retention and retrieval systems. (IV Health Information Systems, V Health Records, VI Information Storage & Retrieval)

7. Collect and analyze patient and institutional data for health care and health related programs. (IV Health Information System, V Health Records)

8. Assist in research and statistical analysis to provide administrative and clinical information for institutional management and to evaluate patient care. (VII Health Statistics, VIII Quality Assurance Systems, and IX Classification and Indexing Systems)

9. Assist in the development and coordination of programs to assure quality of patient care and appropriate utilization of services as required by the facility, organization, or agency. (VIII Quality Assurance Systems)

10. Develop in-service educational materials and conduct and evaluate instructional programs for health record personnel. (III Personnel Administration)

11. Coordinate and integrate the efforts of the health record department with those of other departments to achieve institutional goals. (I Management)

12. Participate in committee functions relative to health record systems, administrative activities, and quality review studies. (I Management, VIII Quality Assurance Systems)

13. Support and practice the ethical principles of health care and health record administration. (II Legal Aspects)

The 1977 Medical Record Technician Essentials list 14 major functions of the MRT. The nine Major Responsibility areas identified in the AMRA Role Verification Studies are listed after each major function - as a guide to some of the specific identified responsibilities which relate to this function and aid in correlating the requirements of the Essentials for accredited educational programs for ART and RRA with the 1981 update of verified specific responsibilities for each level.

1. Technically analyze and evaluate health records according to standards established by current law, regulations and accrediting agencies. (V Health Care Records, VIII Quality Assurance Systems)

2. Compile and utilize various types of administrative and health statistics, e.g., patient census, daily discharge analysis, monthly patient data reports and vital statistics. (VII Health Statistics)

3. Code symptoms, diseases, operations, procedures and other therapies according to recognized classification systems. (IX Classification & Indexing Systems)

4. Release health information (medicolegal, insurance and correspondence requests) in accordance with professional ethics and in conformity with institutional policy and legal provisions. (II Legal Aspects)

5. Maintain and utilize a variety of health record indexes, storage and retrieval systems. (VI Information Storage & Retrieval)

6. Perform patient registration activities. (IV Health Information System, V Health Care Records)

7. Transcribe medical reports. (IV Health Information Systems)

8. Complete and/or verify discharge data abstracts. (V Health Care Records)

9. Prepare health data input for computer processing, storage and retrieval. (VI Information Storage & Retrieval)

10. Maintain specialized registries, such as cancer, trauma, stroke. (VI Information Storage & Retrieval)

11. Abstract and retrieve health information used for evaluating and planning in health care and health related programs. (VIII Quality Assurance Systems)

12. Participate in committee functions relative to health records and patient information systems. (I Management)

13. Provide data to the health care facility staff on patient care evaluation, utilization review, planning and research activities. (VIII Quality Assurance Studies)

14. Supervise one or more health record service activities such as: transcription, word processing, filing, coding and indexing, statistics and correspondence. (I Management, IX Classification and Indexing, II Legal Aspects)

    This function may include:

    - planning and assigning work loads
    - communicating work priorities to appropriate personnel

- assisting in planning and implementing short and long-range departmental objectives
- assisting personnel under their supervision in their work
- preparing appropriate reports on activities in units under their supervision
- assisting in in-service education and the training of personnel
- assisting in evaluating and improving the systems, forms. procedures, methods, and motions used in accomplishing work in units under their supervision
- assisting in the preparation of departmental budgets
- assisting in research and selection of systems, services, supplies, and equipment.

The content areas required in each set of Essentials should be cross matched with the major and specific responsibility statements verified through the 1981 Role Verification Update - to assure that a planned curriculum includes instruction in all responsibilities identified and verified for the entry-level generalist ART or RRA. See Appendix B for examples of planning grids which can be used to relate specific responsibility statements to required content areas as expressed in the Essentials.

VI. Environmental and Societal Forces

Planning for any curriculum, particularly a professional curriculum, must take into account the milieu in which the profession, the educational institution, and the program exist - the impacts on the profession and the institution of societal trends and value shifts. Major foces include the economic, social, political, and technological factors present in the environment in which professionals live, work, and provide health care services, and in which the educational programs operate.

Rapid developments in the technology of medical record services influence professional practice, and require an ongoing commitment to education and training in the growing areas of computerization and information management. Rising costs of inpatient and outpatient care exert pressure on the medical record professional to help contain costs by efficient and adequate record-keeping, non-duplication of records and services, and accurate reporting services. The political climate influences medical record practice when, through health legislation, mandates for additional health record information or patient confidentiality procedures are enforced and systems for quality assurance in health care and risk management are required. National movements demonstrate changing social values regarding, for instance, the terminally ill, the disabled, disease prevention, public health education issues, and holistic medicine. These changing social values influence health practitioners' awareness of the need for the creation of new types of health facilities and related medical record services.

Appendix A

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APPENDIX B

CORRELATION OF MAJOR AND SPECIFIC RESPONSIBILITY STATEMENTS WITH CURRICULUM CONTENT

Conceptual Model for Curriculum Development

Curriculum Planning Grids - MRT Programs

Curriculum Planning Grids - MRA Programs

This schematic representation (Figure 1) shows the progression from verified major and specific ART and RRA responsibilities to the overall curriculum plan.

CONCEPTUAL MODEL FOR CURRICULUM PLANNING

Based on Major and Specific Responsibilities of ARTs and RRAs

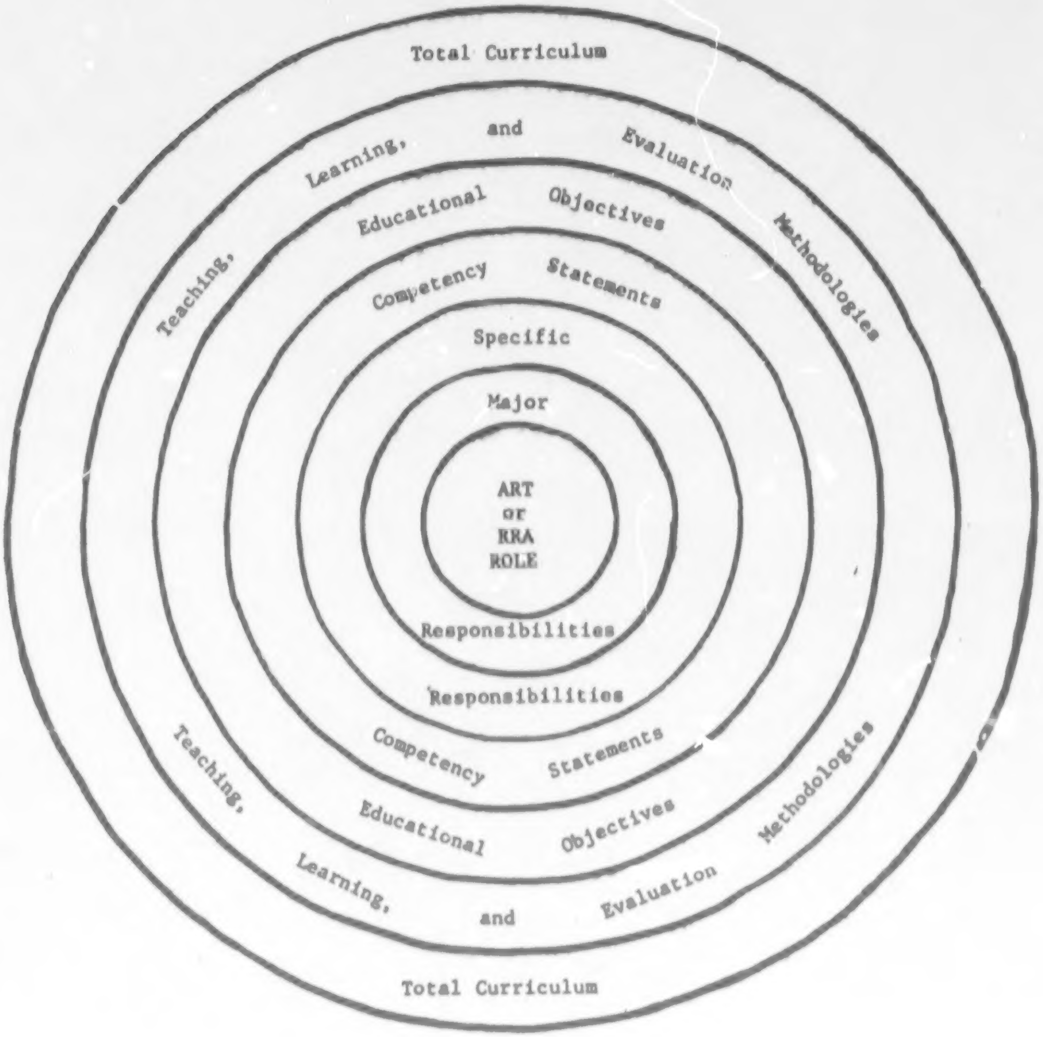
Total Curriculum
Teaching, Learning, and Evaluation Methodologies
Educational Objectives
Competency Statements
Specific
Major
ART or RRA ROLE
Responsibilities
Responsibilities
Competency Statements
Educational Objectives
Teaching, Learning, and Evaluation Methodologies
Total Curriculum

Figure 1

CORRELATION OF MAJOR AND SPECIFIC RESPONSIBILITY STATEMENTS WITH CURRICULUM CONTENT

This section is designed to help faculty use the verified entry-level ART and RRA responsibility statements in curriculum planning and evaluation to determine if all required responsibilities are included.

Two aids are provided:

1. a conceptual model for curriculum planning (Figure 1),
2. examples of curriculum planning grids (Figures 2-5), to correlate content areas required in the Essentials for Accredited Educational Programs for the Medical Record Administrator and Medical Record Technician, with major and specific responsibilities for each role.

CONCEPTUAL MODEL FOR CURRICULUM DEVELOPMENT

The competency-based curriculum model presented in Chapter 1 describes the process of curriculum development. The AMRA, through its role delineation studies, has carried the process through to the development and verification of specific responsibility statements for ARTs and RRAs on a national basis, and these are included in Chapter 2. Action statements regarding affective characteristics essential for medical record practice have been identified and are included in Chapter 3.

Chapters 1 and 4 provide guidelines and examples of how to write competency statements and terminal and enabling objectives for a competency based educational program from the verified responsibility statements. In the process of analyzing each specific responsibility statement, faculty must identify the knowledge, skills, and attitudes necessary for competent performance. The grouping of terminal and enabling objectives into courses, units, or lessons can be carried out by faculty in a manner suitable to the individual educational program or school. In this way the content of the discipline is derived from major and specific responsibilities and stated competencies.

CURRICULUM PLANNING GRIDS

Curriculum planning for medical record education is influenced by two major factors:

1. national research studies which have identified the two major roles with the medical record field and their corresponding specific responsibilities, and

2. requirements of the Essentials for Accredited Educational Programs for the Medical Record Administrator and the Medical Record Technician.

Examples of curriculum planning grids (Figures 2-5) for ART and RRA educational programs have been developed which incorporate these two major factors. They are designed to help faculty clarify the distribution of required responsibilities into content areas specified in "Essentials."

Faculty are encouraged to use these examples of planning grids to assure inclusion in the educational program of instructional content related to each specific responsibility statement. The grids may also be used to determine laboratory or clinical practice activities which need to be planned related to specific responsibilities. The grids will be helpful to faculty planning new programs or evaluating present programs in the light of the updated verified responsibilities for entry-level graduates.

There are sixteen major content areas specified in the Essentials for an Accredited Educational Program for Medical Record Administrators:

> Sciences, Medical Terminology, Record Management, Health Information Management, Management Foundations, Management Technology, Resource Management, Management of Human Resources, In-Service Education, Medico-legal Aspects, Utilization and Evaluation of Health Care Services, Research Methods and Statistics, Health Care Delivery Systems, Computers in Health Care, Laboratory and Clinical Practice Experience.

Ten major content areas are specified in the Essentials for an Accredited Educational Program for the Medical Record Technician:

> Medical Terminology, Health Care Delivery Systems, Health Records, Ethical/Legal Aspects, Processing of Health Data, Admitting Procedures, and Directed Clinical Practice.

One set of grids is provided for MRA Program Essentials and one for MRT Program Essentials. Within each set, a separate grid is provided for two of nine major responsibility areas, Management and Legal Aspects.

The horizontal headings represent the required content areas in the Essentials. The specific responsibilities within each major area are listed in the left column.

Specific responsibilities have been grouped by topics (action areas) within each major responsibility area. For example, in the sample grid for the major responsibility area of Management, specific responsibilities fall into activities concerned with departmental management, policies and procedures, evaluation and quality control, work flow, and the development of management information. The major topical groupings for Legal Aspects are policies and procedures formulation and evaluation, advising and supervision of personnel, and the release of health information.

Faculty may find in reviewing the entire listings of entry-level responsibilities (See Chapter 2) that some need to be covered in more than one content area and at different cognitive or skill levels. A careful analysis of each responsibility, following the plan described in Chapter 1, will assure its inclusion within the total curriculum, in the appropriate content area(s), and with educational objectives specified at the appropriate level.

Major decisions regarding in which course or in what sequence a responsibility needs to be are left to the faculty. This document does not provide a standardized curriculum format or structured content outlines for MRT and MRA educational programs. As a resource document for medical record educators, it provides a variety of planning aids to enable faculty to select and use suitable approaches for curriculum planning, implementation, and evaluation.

The following are general principles for the development of competency-based curricula for the medical record field:

1. Focus is on the preparation of the entry-level ART or RRA generalist.

2. Content is based upon identified and verified roles and specific responsibilities (competencies) of entry-level ART and RRA practitioners.

3. The curriculum provides opportunities for the integration and application of learned concepts, attitudes, values, and skills in real life learning experiences within helath care clinical settings, directly related to professional practice.

4. The curriculum provides for the simultaneous development of cognitive abilities, skills, attitudes, and values required for professional practice.

5. The professional curriculum is based upon a sound general or liberal education at the post-secondary level, which includes basic and life sciences, communication sciences, behavioral and social sciences with special emphasis on human relations.

6. Organization of the curriculum shows coordinated and well-integrated relationships between program goals and objectives, learning theory, content, learning strategies and resources, and evaluation methodologies.

7. Importance is placed upon attainment of higher intellectual abilities and skills: application, analysis, synthesis, and evaluation, problem solving, decision making, and critical thinking as well as knowledge and comprehension of essential content.

8. Attention is given to the health care field and the social, economic, political, and technological forces which affect the field and medical record practice.

Figure 2
Curriculum Planning Grid — MRT Program

<table>
<tr><td>Major Responsibility:
I. Management: To plan, organize, staff, direct, and control through the principles of management and the practice of medical record science.</td><td colspan="7">General Content Areas (Essentials)
a. Medical Terminology/Transcription
b. Health Care Delivery System
c. Health Records
d. Ethical/Legal Aspects
e. Processing of Health Data
f. Admitting Procedures
g. Directed Clinical Practice</td></tr>
<tr><td>SPECIFIC RESPONSIBILITIES</td><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td><td>f</td><td>g</td></tr>
<tr><td>1. Report progress toward achieving long- and short-range department goals.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>2. Prepare periodic reports on work production.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>3. Explain to superiors the need for new equipment.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>4. Follow existing procedures for departmental functions.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>5. Apply existing policies for collecting and processing health information.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>6. Apply existing policies for departmental functions.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>7. Apply existing departmental personnel policies.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>8. Maintain quantity and quality of departmental work using established standards.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>9. Perform quality assurance studies for medical record services.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>10. Maintain work flow in your area of responsibility within the data collection and processing system.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>11. Examine existing work flow in your area of responsibility within the data collection and processing system.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>12. Follow work flow within the department to identify gaps and overlaps.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>13. Prepare pertienant information for medical staff committees.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>14. Prepare report of the number of physicians' incomplete records for designated medical and administrative staff.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

Figure 3
Curriculum Planning Grid MRT Program

Major Responsibility:

II. Legal Aspects: To provide the necessary service to assure that the legal aspects of medical record practice and institutional responsibility have been met.

General Content Areas (Essentials)

a. Medical Terminology/Transcription
b. Health Care Delivery System
c. Health Records
d. Ethical/Legal Aspects
e. Processing of Health Data
f. Admitting Procedures
g. Directed Clinical Practice

SPECIFIC RESPONSIBILITIES	a	b	c	d	e	f	g
1. Follow specific procedures to ensure that the confidentiality of health information is maintained.							
2. Follow existing procedures for the control, use, and release of health information.							
3. Apply existing policies for the control, use, and release of health information.							
4. Follow existing procedures for the transmittal of health information to and from other health care facilities upon transfer of a patient.							
5. Follow existing procedures for reporting health information as required by applicable legal, accrediting, licensing, and certifying regulations.							
6. Follow existing procedures for the preparation and use of health information in legal proceedings.							
7. Follow procedures for handling authorizations requesting the release of health information to assure validity.*							
8. Respond to requests for health information.							
9. Retrieve records for release of health information.							
10. Select appropriate information for release.							
11. Locate information for reports for applicable legal, licensing, certifying, and accreditation agencies.							
12. Apply existing procedures for the preparation and use of health information in legal proceedings.							
*Requests include legal documents, such as subpoenas and court orders, requests from attorneys, insurance companies, patients, etc.							

Figure 4 Curriculum Planning Grid MRA Program

Major Responsibility

I. **Management:** To plan, organize, staff, direct and control medical record services through the use of principles of management and the practice of medical record science.

General Content Areas Essentials)

a. Sciences
b. Medical Terminology
c. Record Management
d. Health Information Management
e. Management Foundations
f. Management Technology
g. Resource Management
h. Management of Human Resources
i. In-service Education
j. Medico-legal Aspects
k. Utilization and Evaluation of Health Care Services
l. Research Methods and Statistics
m. Health Care Delivery Systems
n. Computers in Health Care
o. Laboratory Experience
p. Clinical Practice

SPECIFIC RESPONSIBILITIES	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
1. Establish long- and short-range department goals.																
2. Plan physical environment of department, including the organization of personnel and equipment.																
3. Recommend changes in existing organizational units of the medical record department as needed.																
4. Develop departmental budget.																
5. Recommend to superiors the need for new equipment.																
6. Develop forms for administrative use in the medical record department.																
7. Organize departmental management reporting systems.																
8. Assess departmental operations to assure cost effectiveness.																
9. Evaluate progress toward achieving long- and short-range department goals.																
10. Develop policies for departmental functions.																
11. Incorporate applicable legal, ethical, accrediting, licensing, certifying, and institutional requirements into departmental policies and procedures.																
12. Revise existing policies for departmental functions.																
13. Revise existing procedures for departmental functions.																
14. Supervise the implementation of departmental policies and procedures.*																
15. Solve problems related to policies and procedures.																
16. Evaluate the effectiveness of policies and procedures for collecting and processing health information.																
17. Establish quantity and quality standards for departmental work.																
18. Supervise quantity and quality of departmental work using established standards.																
19. Maintain quantity and quality standards for departmental work.																
20. Perform quality assurance studies for medical record services.																
21. Establish control procedures to assure accuracy and completeness of coded information.																
22. Develop work simplification studies.																
23. Assess the flow of patient care data within the institution to assure receipt in the medical record department.																
24. Establish work flow in your area of responsibility within the data collection and processing system.																
25. Rearrange work flow within the department after identifying gaps and overlaps.																
26. Revise existing work flow in your area of responsibility within the data collection of processing system.																
27. Prepare pertinent information for administrative committees.																
28. Prepare pertinent information for medical staff committees.																
29. Recommend procedures to meet the needs of other departments for licensure, certification, and accreditation, as those needs relate to medical record procedures or statistics.																
30. Communicate new developments in health records and health data systems to members of the medical record committee and appropriate staff members.																

*Includes determining if policies and procedures ensure conformance with applicable legal, ethical, accrediting, licensing, certifying, and institutional requirements.

Figure 5
Curriculum Planning Grid — MRA Program

Major Responsibility	General Content Areas (Essentials)
II. Legal Aspects: To provide the necessary service to assure the legal aspects of medical record practice and institutional responsibility have been met.	a. Sciences b. Medical Terminology c. Record Management d. Health Information Management e. Management Foundations f. Management Technology g. Resource Management h. Management of Human Resources i. In-service Education j. Medico-legal Aspects k. Utilization and Evaluation of Health Care Services l. Research Methods and Statistics m. Health Care Delivery Systems n. Computers in Health Care o. Laboratory Experience p. Clinical Practice

SPECIFIC RESPONSIBILITIES	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
1. Develop policies for the control, use, and release of health information.																
2. Develop specific procedures to ensure that the confidentiality of health information is maintained.																
3. Incorporate applicable legal, ethical, licensing, accrediting, certifying, and institutional requirements into policies and procedures for the control, use, and retrieval of health information.																
4. Incorporate applicable legal, ethical, accrediting, licensing, certifying, and institutional requirements into data collecting and processing policies and procedures.																
5. Evaluate the effectiveness of policies and procedures related to the control, use, and release of health information.*																
6. Advise institutional personnel on applicable legal, ethical, licensing, accrediting, certifying, and institutional requirements for the control, use, and release of health information.																
7. Supervise the control, use, and release of health information.																
8. Determine the validity of authorizations requesting the release of health information.+																
9. Respond to requests for health information.+																
*Includes determining if policies and procedures ensure conformance with legal, ethical, accrediting, licensing, certifying and institutional requirements. +Requests for health information include legal documents, such as subpoenas and court orders, requests from attorneys, insurance companies, patients, etc.																

APPENDIX C

Essentials and Guidelines of an
Accredited Educational Program
for the Medical Record Technician

(removed--poor
reproducibility)

Essentials and Guidelines of an
Accredited Educational Program
for the Medical Record Administrator

(removed--poor
reproducibility)

American Medical Record Association
Code of Ethics

Educational Resource Document
Evaluation Questionnaire

AMERICAN MEDICAL
RECORD ASSOCIATION

875 North Michigan Avenue
Suite 1850
Chicago, Illinois 60611

Code of Ethics

Preamble:
The medical record practitioner is concerned with the development, use, and maintenance of medical and health records for medical care, preventive medicine, quality assurance, professional education, administrative practices and study purposes with due consideration of patients' right to privacy. The American Medical Record Association believes that it is in the best interests of the medical record profession and the public which it serves that the principles of personal and professional accountability be reexamined and redefined to provide members of the Association, as well as medical record practitioners who are credentialed by the Association, with definitive and binding guidelines of conduct. To achieve this goal, the American Medical Record Association has adopted the following restated Code of Ethics:

I Conduct yourself in the practice of this profession so as to bring honor and dignity to yourself, the medical record profession and the Association.

II Place service before material gain and strive at all times to provide services consistent with the need for quality health care and treatment to all who are ill and injured.

III Preserve and secure the medical and health records, the information contained therein, and the appropriate secondary records in your custody in accordance with professional management practices, employer's policies and existing legal provisions.

IV Uphold the doctrine of confidentiality and the individual's right to privacy in the disclosure of personally identifiable medical and social information.

V Recognize the source of the authority and powers delegated to you and conscientiously discharge the duties and responsibilities thus entrusted.

VI Refuse to participate in or conceal unethical practices or procedures in your relationship with other individuals or organizations.

VII Disclose to no one but proper authorities any evidence of conduct or practice revealed in medical reports or observed that indicates possible violation of established rules and regulations of the employer or professional practice.

VIII Safeguard the public and the profession by reporting to the Ethics Committee any breach of this Code of Ethics by fellow members of the profession.

IX Preserve the confidential nature of professional determinations made by official committees of health and health-service organizations.

X Accept compensation only in accordance with services actually performed or negotiated with the health institution.

XI Cooperate with other health professions and organizations to promote the quality of health programs and the advancement of medical care, ensuring respect and consideration for the responsibility and the dignity of medical and other health professions.

XII Strive to increase the profession's body of systematic knowledge and individual competency through continued self-improvement and application of current advancements in the conduct of medical record practices.

XIII Participate in developing and strengthening professional manpower and appropriately represent the profession in public.

XIV Discharge honorably the responsibilities of any association position to which appointed or elected.

XV Represent truthfully and accurately professional credentials, education, and experience in any official transaction or notice, including other positions and duality of interests.

Adopted October 7, 1957. Revised October 17, 1977

Educational Resource Document
Evaluation Questionnaire

Name of Institution ______________________________

Name of Program ______________________________

Name of person completing Questionnaire ______________________________

Title ______________________________

Total number of students enrolled in curriculum (full-time and part-time):

in the MRT Program _____ in the MRA Program _____

Number of Faculty: Full-time _____ Part-time _____

Please answer the following questions as completely as possible, using as a frame of reference the usefulness of the ERD in designing or modifying a medical record curriculum. If there are chapters or sections that you think are not as helpful, or complete, or accurate as you think they could be, please give your reasons and comments in the open-ended responses —noting omissions, disagreements, and giving your suggestions for improvement. *(Please use additional paper, as necessary).*

1. **Chapter 1: Curriculum Design in Competency-Based Education**
   a. To what extent do you think the basic content of this chapter has accomplished its objectives of providing a general approach to curriculum in competency-based education that can be adapted to the needs of individual medical educational programs?

   To a very great extent _____ To a moderate extent _____ Hardly at all _____

   b. How could the basic chapter content be improved?

   ____

   ____

   ____

   c. How helpful do you think the practical model for individual course development will be in designing/modifying a medical record curriculum?

   Very _____ Moderately _____ Of little or no help _____

   Please comment on specific aspects of the model

   ____

   ____

   ____

   d. How helpful do you think that the student learning modules in the appendix will be in designing/modifying a medical record curriculum?

   Very _____ Moderately _____ Of little or no help _____

   Please comment: ______________________________

   ____

   ____

   e. How helpful do you think the annotated bibliography will be as a resource guide?

   Very _____ Moderately _____ Of little or no help _____

   Please comment, and add any other major references you think should have been included. _____

   ____

   ____

   ____

2. **Chapter 2: Roles and Responsibilities**

   a. To what extent do you think the basic content of this chapter has accomplished its objectives of providing a relevant background of information on the roles and responsibilities of medical record personnel and providing medical record education with a framework for designing/modifying a curriculum?

   To a very great extent ______ To a moderate extent ______ Hardly at all ______

   b. How could the basic chapter content be improved?

   c. How helpful do you think the breakdown of responsibilities under each major responsibility will be in designing/modifying a medical record curriculum?

   Very ______ Moderately ______ Of little or no help ______

   Please comment on specific responsibilities, noting any you think should have been deleted, or additional ones you think should have been included. ______

   d. How useful do you think the section on the use of the updated responsibilities data by medical record educators will be in designing/modifying a curriculum?

   Very ______ Moderately ______ Of little or no use ______

   Please comment on specific aspects. ______

   e. How helpful do you think the annotated bibliography will be as a resource guide?

   Very ______ Moderately ______ Of little or no help ______

   Please comment, and add any other major references you think should have been included. ______

3. **Chapter 3: The Affective Domain**

   a. To what extent do you think the basic content of this chapter has accomplished its objectives of providing an overview of the affective domain, identifying critical affective characteristic for medical record professionals, providing examples of competencies and enabling objectives for critical affective characteristics, and suggesting an implementation plan for development of affective characteristics in the curriculum?

   To a very great extent ______ To a moderate extent ______ Hardly at all ______

   b. How could the basic chapter content be improved?

   c. How helpful do you think the sample classification scheme and the action statements for the affective domain will be in designing/modifying a curriculum?

   Very ______ Moderately ______ Of little or no help ______

   Please comment on specific aspects of the classification scheme and the action statements, noting anything you think should have been added or deleted. ______

d. How helpful do you think the glossary, bibliography, and other chapter-end materials will be as resources?

Very ______ Moderately ______ Of little or no help ______

Please comment, noting anything you think should have been added or deleted. ______

4. **Chapter 4: Educational Objectives**

a. To what extent do you think the basic content of this chapter has accomplished its objectives of describing more fully the components and criteria of enabling and terminal objectives, their levels in each of the three domains, and their relationships to the competencies and responsibilities of the medical record profession?

To a very great extent ______ To a moderate extent ______ Hardly at all ______

b. How could the basic chapter content be improved?

c. How helpful do you think the classification scheme and the examples of enabling and terminal objectives will be in designing/modifying a medical record curriculum?

Very ______ Moderately ______ Of little or no help ______

Please comment, nothing anything you think should have been added or deleted. ______

d. How helpful do you think the annotated bibliography will be as a resource guide?

Very ______ Moderately ______ Of little or no help ______

Please comment, and add any other major references you think should have been included. ______

5. **Chapter 5: Student Learning: Principles, Preferences, Strategies**

a. To what extent do you think the basic content of this chapter has accomplished its objectives of identifying principles and theories of learning and relating them to medical record education and the individual learning styles of medical record students and practitioners?

To a very great extent ______ To a moderate extent ______ Hardly at all ______

b. How could the basic chapter content be improved?

c. How clear are the explanations of the learning principles?

Very ______ Moderately ______ Unclear ______

How helpful do you think these explanations will be in modifying/designing a medical record curriculum?

Very ______ Moderately ______ Of little or no help ______

Please comment on specific principles and explanations. ______

d. How helpful do you think the learning modules and the examples of each of the learning modes will be in designing/modifying a curriculum?

Very ____ Moderately ____ Of little or no help ____

Please comment on specific modules and examples. ____

e. How helpful do you think the appendix on small group learning will be as an additional resource in designing/modifying a curriculum?

Very ____ Moderately ____ Of little or no help ____

Please comment ____

f. How helpful do you think the annotated bibliography will be as an additional resource in designing/modifying a medical record curriculum?

Very ____ Moderately ____ Of little or no help ____

Please add any other major references you think should have been included. ____

6 **Chapter 6: Teaching Strategies**

a. To what extent do you think the basic content of this chapter meets its objective of describing a range of strategies appropriate to both the affective and the cognitive domains and to individual and group learning activities?

To a very great extent ____ To a moderate extent ____ Hardly at all ____

b. How could the basic chapter content be improved?

c. How helpful do you think the examples of different teaching strategies and the suggested step-by-step procedures will be in designing/modifying a medical record curriculum?

Very ____ Moderately Of little or no help ____

Please comment on specific strategies and procedures. ____

d. How helpful do you think the annotated bibliography will be as a resource guide?

Very ____ Moderately ____ Of little or no help ____

Please add any other major references you think should have been included. ____

7. **Chapter 7: Evaluation**

a. To what extent do you think the basic content of this chapter has accomplished its objective of providing faculty with a framework for evaluating student learning?

To a very great extent ______ To a moderate extent ______ Hardly at all ______

b. How could the basic chapter content be improved?

c. How helpful do you think the section on competency statements, terminal objectives, and enabling objectives will be in designing/modifying specific plans for evaluation of medical record students?

Very ______ Moderately ______ Of little or no help ______

Please comment on specific competency statements and objectives. Are there any you think should be deleted or any others you think should have been included?

d. How helpful do you think the explanations and examples of various evaluation techniques (e.g., various types of tests, rating scales, anecdotal records, and so on) will be in planning for student evaluation?

Very ______ Moderately ______ Of little or no help ______

Please comment on specific explanations and examples of techniques. ______

e. How helpful do you think the reference material in the appendices and the list of references at the end of the chapter will be as resources for designing/modifying the evaluation component of a medical record curriculum?

Very ______ Moderately ______ Of little or no help ______

Please comment. ______

8. **Appendix A: Frame of Reference for Medical Record Education**

a. To what extent do you think the basic content of this appendix has accomplished its objective of providing a frame of reference for medical record education.

To a great extent ______ To a moderate extent ______ Hardly at all ______

b. How could the basic content be improved?

c. How useful do you think the six sections will be in designing/modifying a medical record curriculum?

Very ______ Moderately ______ Of little or no help ______

Please comment. ______

9. **Appendix B: Correlation of Responsibilities with content areas of the Essentials**

a. To what extent do you think the basic content of this appendix has accomplished its objective of providing a bridge between the specific responsibility statements for ARTs and RRAs and curriculum and course content?

To a great extent ______ To a moderate extent ______ Hardly at all ______

b. How could the basic material be improved?

____

____

____

c. How useful do you think the grids will be in designing/modifying a medical record curriculum?

Very ______ Moderately ______ Of little or no help ______

Please comment. ____

____

____

____

10. How would you evaluate the overall usefulness of the ERD as a curriculum resource in helping you improve your educational program?

Very useful __________ Moderately useful __________ Or little or no use __________

Please comment on your overall evaluation: ____

____

____

____

11. How would you plan to use the ERD in your institution? Check as many statements as apply.

______ In curriculum planning
______ In competency-based education development
______ In student advisement
______ For evaluation of student performance
______ For faculty training and development
______ For writing educational objectives
______ For selecting teaching strategies
______ For individualizing instruction
______ In matching roles and responsibilities to curriculum and courses
______ In integrating and implementing the affective domain in curriculum
______ For further study and research
______ In individual course development
______ In reviewing entry-level practitioner responsibilities
______ For identifying affective characteristics
______ For classifying educational objectives
______ In constructing classroom achievement test
______ In writing affective objectives
______ For identifying student learning preferences
______ In developing student learning strategies
______ In improving teaching techniques
______ In selecting student evaluation techniques
______ In identifying the major ideas and forces which influence medical record practice and education
______ For developing overall program goals and objectives
______ In selecting instructional content and process
______ In organizing and integrating the curriculum
______ In determining competencies needed by entry-level and experienced practitioners
______ In planning course content
______ In deciding the level of instruction

Other uses (please specify) ____________________

12. Please add any additional comments here. ____________________

Thank you for your participation